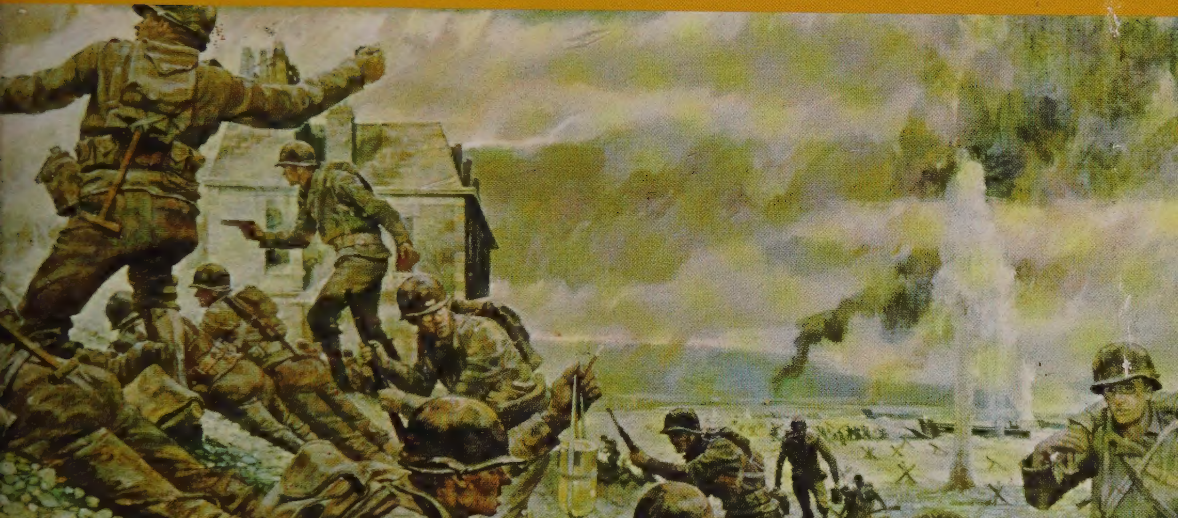
SIXTH EDITION

READINGS FOR THE HISTORY OF THE MILITARY ART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VERSION

CHRISTOPHER N. PRIGGE
EVAN A. HUELFER

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SIXTH EDITION

REVISED VERSION

Department of History
United States Military Academy
West Point, New York

CHRISTOPHER N. PRIGGE
EVAN A. HUELFER

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Preface

The essays and articles contained herein are selected readings designed to support the second half of the one year survey course, The History of the Military Art, taught at the United States Military Academy. This issue of readings is not intended to be a thematic collection. Its sole purpose is to fulfill specific course requirements and is intended for the exclusive use of the Department of History, United States Military Academy.

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Reading 1

THE OFFENSIVE TACTICS OF 1918

Captain Timothy T. Lupfer

Introduction

Bullets quickly write new tactics.

—Wilhelm Balck[1]

Although the immediate events of the summer of 1914 which led to the First World War surprised Europe, the possibility of a general European conflict had been anticipated by governments and the military. Despite this anticipation, confusion characterized the conduct of the war, from beginning to end. No belligerent had prepared adequately for the actual conditions and demands of this long war. The confusion was particularly apparent in the realm of tactics on the western front. Prewar tactical

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Reprinted with permission from *The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War* by Timothy T. Lupfer (Combat Studies Institute, 1981), vi-ix, 37-58.

Captain Timothy T. Lupfer was an assistant professor of military history at United States Military Academy where he graduated in 1972. As a Rhodes Scholar, he received a bachelor's and master's degree in modern history from Oxford University.

doctrine had become inappropriate by December 1914. On all sides expedient modifications soon competed with the prewar doctrine.

Military doctrine is guidance for conduct of battle approved by the highest military authority. In the Imperial German Army on the western front, the Army High Command *(die Oberste Heeresleitung,* hereafter called OHL) changed tactical doctrine significantly on two occasions. In the winter of 1916-17 OHL adopted a new defensive doctrine which described an elastic defense-in-depth in response to the Allied offensive tactics during 1916 (especially those the British employed at the Somme) and in anticipation of the continuation of similar attacks in the spring of 1917. This change is the subject of chapter 1.* In the winter of 1917-18, OHL developed a new offensive tactical doctrine in hopes of achieving a decisive victory on the western front with their offensives planned for the spring of 1918. This change is the subject of chapter 2.

As the famous tactician, Wilhelm Balck,[2] noted, altering tactical procedures in the middle of such a desperate struggle was a very serious undertaking, especially for the German Army.[3] To alter the deeply ingrained habits in an army famous for its thorough peacetime training was difficult, especially when the confusion of the war made the accuracy of any change uncertain.

The Germans did not win the First World War and their *strategic* conduct of the war was often flawed. Yet, much value can be derived from their development of *tactical* doctrine, for the Germans developed and applied new tactical doctrine impressively in 1917 and 1918. Their tactical changes were systematic and thorough, for these changes in doctrine directly effected subsequent battlefield success. The analysis of the doctrinal changes cannot be restricted to examining changes to regulations because doctrine that influences nothing beyond the printing press is stillborn.

German successes in World War I demonstrated a thorough process:

- Perception of a need for change
- Solicitation of ideas, especially from the battlefield units
- Definition of the change
- Dissemination of the change
- Enforcement throughout the army
- Modification of organization and equipment to accommodate the change
- Thorough training
- Evaluation of effectiveness
- Subsequent refinement

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* Chapter 1 on Lupfer's monograph has been omitted from this excerpt; only Chapters 2 and 3 are reprinted here.

This outline describes the manner by which the German Army succeeded in changing and implementing tactical doctrine during war. The process is not rigidly sequential; it is a dynamic process that requires great intellectual ability and strong character from tacticians who desire to make successful changes.

Many characteristics ascribed to the German military have too often sufficed for explanations of German military success. Glib expressions such as "great organization" or "a knack for war" do little justice to the men who brought success to German arms and, more importantly, offer little guidance for anyone who desires to achieve similar success.

In the examination of the German process of tactical change, several important personalities emerge. Their memoirs certainly must be used with caution, but I have quoted extensively from participants in this paper, in part to convey the essential interest in tactics among the participants. Their interest in tactics is instructive, for not all military leaders possess a continuing interest in tactics.

I do not intend to portray all German tactical efforts as inherently brilliant. The Germans usually achieved a *relative* advantage over the Allies with respect to tactical change. Tentative generalizations about the reasons for this German success and about the limitations of doctrine itself in wartime are described in chapter 3. These conclusions can only be tentative, for the uncertainties of war extend to its analysis.

The Offensive Tactics of 1918

In the second half of 1917, strategic conditions were developing that would offer the Germans an opportunity to concentrate their military power on the western front in 1918. Russia, suffering from internal convulsions as well as the extreme demands of the war, could not sustain the war effort. As peace negotiations with Russia began, German units traveled from east to west. The number of German divisions in the west went from 150 in October 1917 to 192 in March 1918.[1] The opportunity for force concentration in the west had to be seized quickly, for the United States had declared war on Germany in April 1917. The Germans calculated that it would require one year for the United States to exert any decisive influence on operations in the west. Therefore, the changing strategic situation and deteriorating economic and political conditions in Germany (due to the effects of the Allied blockade of Germany) only permitted the Germans one final attempt at victory in the west.

On 11 November 1917 OHL decided that the great offensive would begin in the spring of 1918. Between this decision and the initiation of the offensive on 21 March 1918, the German Army developed the appropriate doctrine and prepared as many units as possible for the attack. In order to destroy the Allied forces, the Germans attempted to solve the tactical dilemma which had frustrated the Allies for more than three years. The preferred German maneuver in prewar doctrine, the envelopment, was impossible to achieve in the west. Therefore, a successful penetration was required, to be followed up by force sufficient to achieve a strategic breakthrough.

Although in two and one-half years the Germans had conducted only one major offensive on the western front (Verdun), the German Army still had considerable experience from which to draw. Units in the east had been participating in several major offensives throughout the war. More recently, in October 1917, a German field army (Fourteenth Army under General Otto von Below), having been formed with units from the western, eastern, and Rumanian fronts, was sent by OHL to northern Italy to cooperate with the Austrians in an offensive against the Italians. General von Below's order to his forces before battle stated:

> Every column on the heights must move forward without hesitation; by doing so opportunities will be created for helping neighbors who cannot make progress, by swinging round in the rear of the enemy opposing him.[2]

At the Battle of Caporetto the Germans and Austrians smashed through the Italian forces, achieving a strategic penetration, and drove the Italians back to the Piave River. The other Allied powers responded, sending French and British units to Italy to strengthen the front. Italy, although badly shaken, remained in the war. The Germans and Austrians had not eliminated Italy from the war, but the Central Powers success had been most impressive. Italy lost 305,000 soldiers, including 275,000 prisoners.[3]

The offensive successes in the east and in Italy had occurred within the unique conditions of each theater. OHL, in considering the peculiar nature of the western front, did not blindly adopt techniques derived outside the west and try to apply them immediately to the western front. Instead, OHL examined each combat experience with respect to the particular conditions in which it had occurred.

Also, the German forces on the western front were better prepared for offensive operations than their record of recent experiences in major offensives indicated. Although Verdun had been an offensive with a limited objective and the 1918 offensive plan sought a strategic breakthrough, the Verdun battles had demonstrated several useful points: the value of sudden concentrated artillery fire in depth before the assault, the need for centralized control of artillery, the value of surprise, and the need for greater combined arms cooperation. The Germans had tried several tactical techniques, such as attaching a horse-drawn artillery battery to an infantry regiment in the attack, in order to provide the infantry better fire support.[4]

The German Army's defensive experiences in 1917 provided another very important source of offensive expertise. The aggressive tenor of the elastic defense-in-depth, especially the counterattack, nurtured offensive excellence. To train the army for this defense, units acquired the spirit of the counterattack, and OHL had codified storm trooper techniques to assist this training. Having accumulated considerable counterattack experience in 1917, the German Army in the west already had a deceptively solid base of doctrine and experience for offensive operations.

The Germans had another source of experience on the conduct of the offense. They had defended against the Allied attacks for three years, and recognized that the Allies had been showing them what not to do.[5] Reliance on massive firepower to destroy the enemy was clearly not the solution. In any event, the Germans could not match the Allied expenditure of munitions, so a different offensive technique was required. A French captain inadvertently provided one important source of inspiration for developing such new techniques.

On 9 May 1915 Captain Andre Laffargue led an attack on a German position. Afterwards, Laffargue reflected upon the problems of the attack and expressed his ideas in a pamphlet, "The Attack in Trench Warfare." The French Army published the pamphlet, but distributed it for information only; it did not become French doctrine. The British did not translate it.[6] Early in the summer of 1916 the Germans captured a copy of the pamphlet, translated it at once, and issued it to units. Ludwig Renn wrote that Laffargue's ideas had immediate use as a tactical manual for German infantry.[7]

Laffargue personified that resource of talent which exists at the small unit level and develops in combat; he was a part of the "human canister" of combat who did not want to die, but to succeed.[8] Exclaiming, "Let us prepare our business down to the slightest detail in order to conquer and live," he set out to record his experiences and ideas.[9]

Laffargue advocated a sudden attack to achieve a deep penetration. His attack resembled a gulp, not a nibble.* The momentum of the in-depth attack would disrupt the enemy, keep him off balance, and prevent him from organizing an effective response. To capitalize on disruption, the assault had to advance as far as possible. The first wave would identify—not reduce—defensive strongpoints and subsequent attack waves would destroy them. An artillery bombardment applied suddenly in depth throughout the enemy area would precede the infantry assault. Disruption of enemy artillery batteries was particularly important to protect the infantry advance.

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* The metaphor likening attacks to consumption of food was popular in the First World War. Joffre described his 1915 strategy of numerous attacks with limited objective by stating, "I am nibbling at them."[10] The German attack regulations of 1918 used the same metaphor and described "devouring" the enemy position.

Laffargue stated that all troops were not assault troops; special training and care were necessary to develop the aggressiveness and skill for the assault. Ironically, the German storm units best epitomized this idea of elite assault units. In his pamphlet, Laffargue also expressed the need for an automatic rifle for firepower in advance positions, a need later met in all armies during the war by the light machine gun.[11]

Although they did not adopt all of Laffargue's ideas (for example, he was very insistent on some rather cumbersome formations), the Germans derived greater benefit from his ideas and put more of his ideas into practice than the French did. German units became well acquainted with his concepts and the operations section of OHL was impressed with the practical combination of surprise, firepower, and maneuver to break the tactical stalemate.[12]

While the Allies had not pursued Laffargue's concept of sudden attack as vigorously as their enemies, they had pursued a technological solution to the tactical dilemma. During the Somme battle in September 1916 the British introduced tanks. The initial use of tanks failed to capitalize on the tactical and strategic potential of the weapon, to the chagrin of the early tank enthusiasts, whose highly original tactical ideas had been rejected by British High Command. In their first battle, tanks were dispersed as infantry supporting weapons and followed the characteristically heavy and long artillery preparation. The Germans quickly developed antitank tactics,[13] but they did not attempt to imitate the Allies in the use of the tank.

On 20 November 1917 at Cambrai the British conducted a surprise limited attack. The attack caught the Germans off-guard, because it had none of the familiar signs that forewarned of Allied attacks. Instead of the long relentless artillery preparation, there was a very brief but concentrated artillery barrage, fired without previous registration in order to insure surprise. Immediately thereafter a large concentration of tanks attacked, followed by infantry.

The results of this attack were as unexpected as the tactical procedures. The attack stunned the Germans. The British penetrated the German defensive zones, suffering few Allied casualties. Then, however, supply and reinforcement difficulties stalled further British progress. Their impressive gains formed a large, inviting salient. The Germans moved reinforcements to the area and ten days later eleven divisions of Crown Prince Rupprecht's Army Group launched a deliberate counterattack.

This large-scale counterattack was the first major German offensive action against the British since 1915. The attack began with a bombardment that lasted only a few hours but gradually intensified. German gunners fired large quantities of gas shells along with high explosive rounds. The German infantry quickly advanced, following the rolling barrage. The British Official History provided a description of this infantry assault, which clearly showed storm unit methods, integration of different arms, and methods of bypassing resistance:

> Preceded by patrols the Germans had advanced at 7 a.m. in small columns bearing many light machine guns, and, in some cases, flamethrowers. From overhead low flying airplanes, in greater numbers than had hitherto been seen, bombed and machinegunned the British defenders, causing further casualties and, especially, distraction at the critical moment. Nevertheless few posts appear to have been attacked from the front, the assault sweeping in between to envelop them from flanks and rear.[14]

The Germans pushed deeply into the British positions, so quickly that the British general commanding the 29th Division barely avoided capture, escaping in his pajamas.[15] In time, confusion abated and British resistance intensified. The campaign ended with lines drawn almost where they had been before the initial tank assault of 20 November.

Ludendorff had expected greater success, but he was still pleased with the results of the counterattack because it had been achieved by troops who had not been specially trained for an offensive.[16] Analyzing the recent experiences almost immediately, Crown Prince Rupprecht's Army Group staff quickly circulated to its units a memorandum that stressed the importance of surprise as demonstrated at Cambrai.[17] This analysis of recent tactical experience was a characteristic German Army method. British General Headquarters also circulated to its units a pamphlet describing a successful action of three British divisions in the defense against the German counterattack. The British Official History noted that this effort by British GHQ was "unusual."[18]

The Offensive Doctrine

On 1 January 1918 OHL published *The Attack in Position Warfare* (hereafter referred to as *Attack*), which became the basic document for the German offensives of 1918. Just as *Principles* had described a defense that incorporated the entire battlefield in depth instead of emphasizing only the front line, *Attack* described an attack-in-depth, a devouring* of the entire enemy position instead of nibbling away at the enemy front line. Once again that "mere captain," Hermann Geyer, was instrumental in writing the text.[19]

The objective of the major German offensive was to achieve a breakthrough after penetrating the Allied line. In their efforts to penetrate the German defenses, the Allies had relied upon massive artillery fire. The tank was another possible solution, but appropriate tank tactics did not emerge until

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* The German text of this regulation, *Der Angriff im Stellungskrieg,* used the word *fressen*, meaning to devour or to consume.

Cambrai. The Germans could not rely on a long destructive artillery bombardment to give them their penetration, for they lacked the huge quantities of ammunition (their industrial production did not match that of the Allies), and more importantly, they knew such tactics had not worked. The Germans did not seek a solution through technological innovation. For example, they did not attempt to develop the tank on a large scale, but chose to accomplish the attack-in-depth with existing combat means in a carefully coordinated attack relying on surprise.

The doctrine in *Attack* was as applicable to the deliberate counterattacks of the defense as it was to the main attack of an offense to achieve a breakthrough. The introduction to *Attack* clearly stated this and it demonstrated the close tactical connection between the counterattack and the offensive. *Attack* noted that the strategic breakthrough was the ultimate goal of the penetration. In order to achieve that goal the attack had to strike deeply into the enemy position. Acknowledging the impossibility of destroying all enemy forces in such a deep penetration, the German tactical doctrine did not require complete destruction. Instead, disruption of enemy units and communications was essential. Throughout the doctrine, keeping the enemy off balance, pressing the attack continuously, and retaining the initiative received great emphasis.

The authors of *Attack* described all artillery missions (preparatory fire, creeping barrage, isolating the objective) with the acknowledgment that total destruction of enemy forces could not be achieved. For instance, artillery would neutralize, not necessarily destroy, enemy artillery batteries; the *Attack* strongly recommended gas shells because of their disruptive characteristics. The *Attack* clearly identified the need to move artillery and ammunition forward to maintain the attack. Also, the authors devoted 21 of the 113 paragraphs of *Attack* to air forces, which received an increased role in strafing enemy positions.

Attack stressed infantry-artillery cooperation and recommended pyrotechnics to control creeping barrages. Special horse-drawn artillery batteries provided mobile artillery to infantry regiments, a technique used at Verdun and in some storm battalion organizations. The doctrine encouraged any techniques that could assist the artillery in keeping up with the infantry, for in the German attack the infantry, *not* the artillery, determined the speed of the attack:

> The momentum of the infantry must not be dependent on the barrage, but vice versa, otherwise the dash of the infantry will be checked in the rigid curtain of fire.[20]

While the *Attack* urged German infantrymen to exploit the effects of artillery, it also reminded them that success depended on their own skill. No amount of munitions could relieve the infantryman from his responsibility to close with the enemy.[21]

To conduct the attack, the German infantry organized in depth. Speed and depth were the means of securing their flanks and rear: speed to keep the enemy from reacting in time to the attack, and depth to provide the follow-up units which would isolate the bypassed pockets of resistance and prevent these remnants from interfering with the continuation of the attack.[22]

There has been some confusion about the name of these new German offensive tactics. After the German offensive of 1918, the French called the tactics "Hutier tactics," attributing them to General Oskar von Hutier. After serving on the eastern front, von Hutier was transferred to the west for the 1918 offensives, during which his Eighteenth Army achieved the greatest successes against the enemy. The French credited him with the invention of the offensive tactics, and perhaps this erroneous conjecture provides another example of the personality-dominant thinking of the Allies. The first Allied reaction to the new German tactics was to attempt to identify an individual inventor. The Germans themselves never used the term "Hutier tactics," and recent research has established clearly that von Hutier did not invent these tactics.[23] The tactics were the product of an effective corporate effort.

A better term is "infiltration tactics." While the German text does not use the equivalent German word, "infiltration" is a satisfactory description of the infantry technique of bypassing resistance and pushing forward as far as possible. However, "infiltration" connotes individual movement, whereas the German movement was in small units, and the word is too exclusively infantry oriented. The German effort emphasized the coordination (*das Zusammenwirken*) of all arms, especially infantry and artillery: just as no one personality was the source of tactical wisdom, there was no one weapon or technique that exclusively carried the German attacks. Like the efforts of the officers in developing doctrine, the efforts of the various arms blended in a complementary fashion.

The Attack Organization

In *Attack* as in *Principles*, the Germans considered the division the basic unit capable of conducting independent battlefield operations. The offensive doctrine, however, established one relationship that differed greatly from the elastic defense-in-depth. Whereas in the defense the forward division commander had the authority to order counterattack units outside his own division organization to deliver an immediate counterattack, in the offensive the higher headquarters retained control of the follow-up units.[24] The reinforcements were kept well forward, but under the direction of higher headquarters they would reinforce success.[25]

To maintain the momentum of an attack, the belligerents had tried several different methods for relieving the leading units in the attack during the war. The French had tried successive waves (the first wave taking one objective, the second wave passing through to take the next one) and the British had used a similar leapfrog technique in 1917.[26] But in *Attack* lead units were instructed to continue without relief, for the doctrine considered it preferable to maintain the attack and exhaust the lead unit, rather than attempt a succession which would lose time and impetus.[27] Unfortunately, this method resulted in severe losses for the lead units, which would have an adverse effect on the 1918 German offensive.

Maintaining the initiative in the offense demanded the same high standard of small unit leadership which the elastic defense-in-depth required. The fluid tactics required independent action by the assault detachments and groups (*Stosstrupps* and *Gruppen*).[28]

The group (*Gruppe*) or section of the light machine gun and riflemen was the basic infantry small unit, as it had been in executing the elastic defense-in-depth. This tactical organization represented a significant change from the prewar technique of an advancing line of similarly equipped infantrymen. Ludendorff remarked that the new role of the light machine gun as the dominant weapon and the subordinate role of the riflemen (to protect the machine gun), as shown during the defensive battles, was a difficult change for many German soldiers, previously trained in infantry units where the rifleman had the dominant role, to understand.[29]

An important aspect of the application of the new offensive doctrine was the role of the storm battalions in teaching the new small unit techniques to the other German infantry units. Each German field army had a storm battalion that acted as a teaching cadre during periods of training. This instruction was so highly regarded that German units on the eastern front began sending officers and noncommissioned officers to the western front to attend storm unit training courses in late 1916. Field armies on the eastern front then imitated their counterparts in the west by establishing their own storm battalions, based on Rohr's unit.[30]

The composition of storm units varied within these possibilities:

1 to 5 storm companies (infantry assault units)

1 to 2 machine gun companies (heavy machine guns)

1 flamethrower section

1 infantry gun battery (light mountain howitzers or captured Russian guns)

1 *Minenwerfer* company (trench mortars)[31]

Besides the established storm battalions for each field army, ad hoc storm units were often formed within infantry divisions and were usually led by a cadre trained by the field army's organized storm battalion.

Established storm battalions assaulted with additional infantry from an accompanying division. The first wave was an infantry probe (from the accompanying division) whose purpose was to identify enemy positions for the next wave, about 250 meters behind. The second wave consisted of the elite storm companies and the flamethrower section, with additional infantry support from the division. This second wave attempted to penetrate the enemy zones by pushing through weak areas to envelop enemy positions. Supporting these efforts was the third wave, about 150 meters behind, which contained the storm battalion's heavy weapons and similar additional support from the division. This third wave provided fire to support the forward movement of the storm companies and to protect the flanks of the penetrations. Behind these three waves followed the remainder of the accompanying division, which reduced pockets of resistance bypassed by the storm units, provided reinforcements, and maintained the momentum of the attack.[32] In sectors where established storm units were not available, infantry divisions used their own ad hoc storm units and imitated storm unit techniques.

The storm unit techniques and the new offensive doctrine emphasized a constant drive forward. Speed and timing were essential for rapid advance, and small unit initiative was crucial to seize the unpredictable and fleeting opportunities of the battlefield. There was no "secret formula" in these techniques. Enemy positions were reduced in a practical fashion: the physical and psychological effects of the advance reinforced each other.

Artillery support was carefully integrated into the assault plan. Although the infantry missions necessitated decentralization of control, the artillery missions in support of the attack required greater centralization of control over artillery. The Germans wanted to avoid any prolonged artillery fire, for surprise would be lost and an artillery duel would develop in which the Allies, with greater amounts of munitions, would eventually prevail.[33] Therefore, German fire had to be fast and accurate, and its mission was neutralization, rather than elusive and costly destruction.

The techniques used to deliver fast and accurate neutralization fire in 1918 were greatly influenced by one very remarkable man, Georg Bruchmüller, the most significant "import" from the eastern front to the western front. He had been on the retired list at the outbreak of the war because of a riding accident.[34] Recalled to active duty during the war, he served on the eastern front. Bruchmüller developed techniques to support attacks with a sudden concentration of accurate fire instead of prolonged preparatory bombardments. In the spring of 1916 he convinced the chief of staff of the Tenth Army to adopt this method of concentration for a major attack at Tarnopol, and the effect in supporting the rapid advance of the infantry was impressive.

Bruchmüller's technique emphasized fire in depth throughout the enemy positions.[35] His support included an accurate creeping barrage, the *Feuerwalze*, for the advancing infantry.

Bruchmüller knew how to derive the greatest benefits from limited means. Attacks received support based upon the estimated *minimum* number of batteries needed to achieve success. Bruchmüller did not attempt to flatten every enemy position, for this was unnecessary:

> In a fire action of a few hours only, the complete destruction of enemy trenches, a complete harassing of rear areas, etc., could naturally not be achieved. This was not at all contemplated. We desired only to break the morale of the enemy, pin him to his position, and then overcome him with an overwhelming assault.[36]

Bruchmüller developed several techniques to achieve this disruption, which required strict control of all artillery assets. Each battery of each type of weapon received specific fire missions with specific timetables. He organized the stages of delivery of fire in this way:

> *First Stage:* Surprise concentration, hitting headquarters, phone links, command posts, enemy batteries, and infantry positions. Fire is sudden, concentrated, and makes extensive use of gas.
>
> *Second Stage:* Most batteries reinforce those batteries already firing on enemy batteries.
>
> *Third Stage:* Fire for effect on designated targets according to range. Some batteries continue to shell infantry positions, and heavy pieces engage long range targets.[37]

Surprise was essential to achieve maximum disruptive effect on the enemy. Therefore, the Germans had to conceal their attack preparations very carefully and their initial target data had to be very accurate.

The relationship between infantry and artillery in all armies often became strained during the war. In 1915, for example, French infantry in one sector wore conspicuous linen cloth on their backs in a vain attempt to avoid being shelled by their own artillery.[38] To develop mutual confidence between infantry and artillery, Bruchmüller began conducting lectures with the infantry unit before an operation. Bruchmüller took great pride in gaining the confidence of the infantry: "The thanks of the infantry, in my opinion, must be treasured more by every artilleryman than all orders and citations."[39] He discussed his targets in detail, describing the timing of the preparation, the conduct of the rolling barrage, and any other matter of mutual concern. At the end of his lectures he would entertain questions, including those from the lowest ranking soldiers.[40]

Bruchmüller soon earned a great reputation as a superb artilleryman. He rose in position in the east, commanding the artillery of von Hutier's Eighth Army at Riga in September 1917. When his unit was transferred to the west in late 1917, Bruchmüller arrived in time to participate in the Cambrai counterattack. Ludendorff knew of Bruchmüller's great skill, and by the beginning of the offensive in March 1918, he had disseminated Bruchmüller's methods to the units in the west. Ludendorff called Bruchmüller "one of the most prominent soldiers of this war."[41]

The skills of Bruchmüller, Rohr, and others were brought together by OHL in the training effort to prepare for the great offensive of 1918.

Preparation for the Offensive

Major Wetzell, OHL's chief of operations for the western front, wrote a memorandum about the coming offensive in which he listed three conditions necessary for success in the west in 1918: surprising the enemy, hitting him at a weak point, and training the army "down to the smallest details in accordance with military principles."[42]

Again, the winter became a period of intense activity for the German Army on the western front. Ludendorff knew that the training efforts of the previous winter had to be imitated, only now in preparation for the offensive.[43]

German training programs throughout the war strongly emphasized individual training.[44] Recruit training behind the front, which stressed this individual training, quickly incorporated the new offensive doctrine. OHL revised the courses of instruction at the officer schools at Sedan and Valenciennes. Each field army established a special instructional center behind the lines where newly arrived units from the east trained in accordance with the new doctrine.[45]

When possible, units withdrew from the front and went to the rear to conduct training exercises. In accordance with OHL training outlines, companies, battalions, and regiments conducted exercises emphasizing assault tactics and coordination of different weapons. The scope of the exercises expanded; complete divisions were able to conduct practice assaults. Pyrotechnic devices were employed in training to develop methods of controlling creeping barrages. Despite a shortage of munitions, the Germans used live ammunition in training to achieve realism. Ernst Jünger's unit trained according to "Ludendorff's marvelously clear scheme of training,"[46] and Jünger recalled the dangers of training with live ammunition:

> Sometimes I made practice attacks with the company on complicated trench systems, with live bombs [grenades], in order to turn to account the lessons of the Cambrai battle [German counterattack of November 1917] ... we had some casualties. ...A machine gunner of my company shot the commanding officer of another unit off his horse while he was reviewing some troops. Fortunately the wound was not fatal.[47]

The artillery units also trained very extensively. Because surprise was essential in the German concept of the attack, the Germans sought methods to develop accurate artillery fire on a first round basis, that is, accuracy without firing registration rounds on the potential target. This was a technique the British had used with success at Cambrai. An artilleryman, Captain Pulkowsky, developed the following method for the German artillery:

- Test fire each artillery piece to determine the peculiar characteristic of the individual gun, called the "special influences."
- Carefully record and tabulate this data for each gun.
- Record the ballistic effects of external factors (wind, atmospheric pressure, precipitation, powder temperature and condition) in tables, under the heading "daily influences."
- Plot initial target data using precise map locations.
- Apply the daily influences and special influences to obtain firing data sufficiently accurate for firing without registration.

Pulkowsky's method met considerable resistance. Von Kuhl, the chief of staff for Crown Prince Rupprecht's Army Group, recalled that several of the subordinate headquarters insisted that no accurate firing could be done without registration. The new method was tested extensively at the artillery school at Maubeuge and finally adopted.[48]

Ludendorff also noticed the objections, but supported the adoption of the method. Captain Pulkowsky became the instructor of the technique and he "carried out his duties with great energy and skill."[49] Pulkowsky instructed about six thousand officers and noncommissioned officers in this technique before the March 1918 offensive.[50] A company grade artillery officer's diary provided evidence of the initial resistance to the new instruction. Upon receiving orders to be trained for the offensive, he was disappointed, for he did not want to attend the school.[51] However, once he began the hard training, which included extensive use of live ammunition, his initial skepticism gave way to acclaim. He described the value of the Pulkowsky method during an attack on 27 May 1918:

> Not a single battery had done any range firing, but our shooting was a masterpiece of accuracy, all worked out and plotted according to the latest principles of ballistics.[52]

In all the extensive preparation for the offensives, OHL did not ignore the continuing refinement of defensive tactics. Of particular importance in light of the Cambrai experience was defense against tanks. The appearance of tanks had often caused German soldiers to panic; OHL reacted to stop this. The artillery units were trained to engage tanks with direct fire. For the infantry, a 13-mm rifle was quickly manufactured, whose bullets could penetrate the armor of

Allied tanks. Tank obstacles became part of defense preparation. The initial panic over tanks was overcome.[53]

This activity contrasted with the reluctance of OHL to begin a major effort in German use of tanks. German units had recommended the German use of tanks from the beginning of Allied employment of tanks, and, for example, a report of 2 October 1916 from the German First Army on the Somme recommended that Germany produce its own tanks.[54] Ludendorff, however, was not enthusiastic. He thought that the limited resources of Germany were better directed to manufacture more motor transport for greater strategic and operational mobility.[55] Therefore for the offensive of 1918, the Germans employed only a few German tanks and a limited number of captured ones. This small effort had a negligible effect on the campaign, and Ludendorff's failure to encourage German tank development has been severely criticized.[56]

Although he probably underestimated the value of tanks, Ludendorff neglected no other aspects of the preparation for the offensive. As early as July 1917 Ludendorff had outlined a comprehensive program of patriotic training for the army. Germany was bearing the burden of the effort for the Central Powers, and the length of the struggle and the economic stagnation were seriously affecting German morale at home and in the army. Ludendorff began the patriotic training to reverse this decline of morale in the army, for the effects of the blockade and the frustration of the war threatened the ability of the German Army to perform according to the high standards demanded by their tactics.[57] Leadership was an important ingredient in improving morale, and OHL published principles of leadership to guide the offensive training, to encourage small unit initiative, and to remind all levels of command that leaders, including commanding generals and their staffs, belonged on the battlefield.[58]

The German Army, however, could not train or equip every division for the offensive. Lack of time, talent, and equipment created an unsatisfactory situation in which 56 divisions out of 192 were designated attack divisions,* while the remaining divisions were called trench divisions (*Stellungsdivisionen*). This distinction was unfortunate but unavoidable for economic reasons. The attack divisions received extra care, better rations, and more equipment, creating resentment among soldiers in the trench divisions.[59]

Another example of a serious manpower shortage that forced the Germans to adopt a grim expedient was their creating a leader reserve, usually in lead units. Heavy casualties had occurred in the officer and noncommissioned officer ranks throughout the war, and in anticipation of such heavy losses in the spring offensive, the German Army identified officers who would be kept out of the fighting intentionally in order to be available to fill the anticipated vacancies caused by casualties.[60]

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*The Germans used the terms *Angriffsdivisionen*, *Stossdivisionen*, or *Mobilmachungsdivisionen* to describe attack divisions.

Despite such difficult conditions, the German Army prepared well for the offensive. Three field armies (Second, Seventeenth, and Eighteenth), designated to conduct the attack on 21 March 1918, contained attack divisions and were ready. Von Kuhl credited this success to Ludendorff's personal efforts,[61] but Ludendorff's greatest contribution was his ability to harness the talents of so many to achieve such unity of effort.

The Offensive

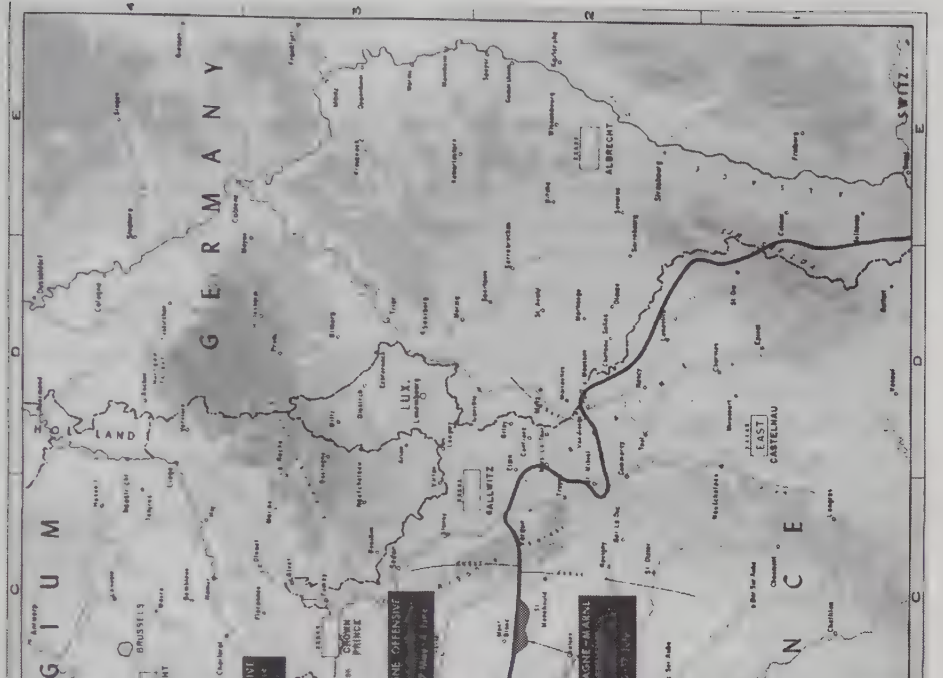
The German offensive began on 21 March 1918. Although the Allies had been expecting a German attack, the extremely rigorous security precautions of the Germans had confused the Allies about the exact location of the main effort. Elaborate German deception measures had convinced the French that the main attack would be delivered in their sector.

The major German attack was directed instead against the British positions east of Amiens (see map). At 0440 on 21 March 1918 the artillery preparation began. Nearly six thousand guns commenced firing in a seven-phase bombardment plan designed by Colonel Bruchmüller. The elaborately planned bombardment lasted only five hours, and then the infantry assaulted. The concentration of fire in those five hours was terrific. One German artillery observer recalled that, whereas the French and British had pounded the Germans for days during Allied offensives, the Germans had only five hours to return the favor. The fumes from the guns were so intense that many German artillery crews donned their protective masks.[62]

On the receiving side, a British soldier remembered his experience:

> I was impressed by the way it came down with one big crash. We had known of the coming attack—but not the exact day.... I had always thought that the bombardment would develop gradually but the full force was almost instantaneous.... One moment we were walking along as normal, the next there were shells bursting all about us. We all ran like mad for cover.[63]

The Germans used gas shells extensively. In areas where an infantry assault was not planned, they used mustard, a persistent agent. In the areas where the German infantry would penetrate, the Germans delivered high explosive shells mixed with shells of chlorine and phosgene gas. The Germans also fired shells containing lachrymatory gas, a throat irritant. The Germans hoped that the irritant would penetrate the British masks, forcing the British soldiers to remove their masks, and thereby exposing themselves to the more


GERMANY
BELGIUM
FRANCE
ENGLAND
LUX.
SWITZ.
BRUSSELS
PARIS
LYS OFFENSIVE 9-29 April
SOMME OFFENSIVE 21 March-4 Apr.
AISNE OFFENSIVE 27 May-4 June
NOYON-MONTDIDIER 9-12 June
CHAMPAGNE-MARNE 15-17 July
RUPPRECHT
CROWN PRINCE
GALLWITZ
ALBRECHT
BEF HAIG
RESERVE FAYOLLE
NORTH FRANCHET D'ESPEREY
CENTER MAISTRE
EAST CASTELNAU
NORTHWEST EUROPE, 1914
WESTERN FRONT, 1918
Situation 20 March and Gains of Five German Offensives Through 18 July 1918

Western Front, 1918.

lethal chlorine and phosgene. Despite its intricacy, this complex plan did not work.[64]

The bombardment did achieve the overall desired effect, however. It disrupted British communications and left British units in confusion. *The British Official History* described the success of the German infantry assault:

> Forward Zone as a whole was overrun at the first rush, the machineguns still in action hardly firing a shot. Making good use of the valleys, where the fog lay heaviest, the leading waves of German infantry swept onwards towards the Battle Zone, leaving the posts and redoubts still holding out in the Forward Zone to be dealt with by special parties.[65]

The advancing German infantry found many British areas in complete disarray. The German artillery fire had been accurate, effective, and efficient.[66]

The British Fifth Army, which bore the brunt of the first day's attack, lost considerable ground (see map). Of the three German armies attacking on 21 March, the Eighteenth Army (von Hutier) achieved the greatest success, although it had not been designated the principal attacking force of the field armies in the attack. Although the British had adopted a defensive system similar to the German one, the British had not understood the essential German concepts. The British had neither efficiently organized their army nor sufficiently modified their training program or their command structure to adapt the defensive concept.[67]

Compared with previous Allied offensive efforts, the German tactical success of 21 March 1918 was impressive. In the Somme battles of 1916 the British and French had labored for 140 days at the cost of more than one-half million casualties to capture a total of ninety-eight square miles of ground. In twenty-four hours in March 1918 the Germans secured about 140 square miles at a cost in casualties of less than one-tenth the Allied expenditure at the Somme.

The approximate casualty figures for 21 March 1918 were:[68]

	Killed	*Wounded*	*Prisoner*	*Total*
German	10,851	28,778	300	39,329
British	7,512	10,000	21,000	38,512

The number of British prisoners reveals how disrupted the British defense was and also suggests that total destruction by fire is not necessarily a prerequisite for a successful attack.

Despite the German tactical success in penetrating the British line, the Germans were unable to achieve a strategic breakthrough. Transport difficulties still plagued German operations. Despite techniques like using prefabricated, wooden travel-ways for artillery,[69] displacing the artillery was still difficult, because of weight, lack of prime movers, and terrain. Despite a severe shortage in horses in the Central Powers, Ludendorff had seemed to perform miracles in obtaining horses for transport for the offensive, but the ability to move the supporting units and the reserves to keep up with the attack still remained elusive. Some critics have also argued that tanks might have assisted in sustaining the momentum of the initial success and that the Germans should have pursued technological innovation more rigorously.[70] Georg Wetzell attributed failure of the German March offensive, however, to unexpected movement of French reinforcements by motor transport, German lack of discipline (soldiers stopped to loot the Allied supply depots which contained ample stocks of items, especially certain food, which their own army lacked because of the blockade), and the lack of drive (too many German units, especially divisions, still waited for permission from higher headquarters to advance, instead of proceeding on their own initiative).[71]

As the tactically impressive but strategically frustrating March offensive stalled, Ludendorff conducted offensives in other sectors of the western front until July 1918, desperately hoping to obtain the increasingly remote strategic breakthrough. Colonel Bruchmüller directed the centralized artillery efforts for OHL in these attempts. However, the German Army expended its forces while the Allies still had large reserves of manpower, specifically American and British. The Allies also had overwhelming superiority in industrial production.

The German offensive in the French sector at Chemin-des-Dames in late May 1918 also had excellent initial results. General Duchesne, commander of the French Sixth Army, had refused to position his forces in depth, although his superior, General Petain, had ordered him to do so. Duchesne, a follower of Foch (who, as overall Allied commander, was Petain's superior), refused to yield any ground elastically, preferring to mass his infantry in the forward trenches. Duchesne thought he was correctly applying the aggressive principles of Foch, that great advocate of the offensive, by placing forces forward and refusing to yield any ground to a German attack.

At 0100 on 27 May 1918 Bruchmüller's 3,179 guns fired on the French positions and about two and one-half hours later the German infantry advanced. French failure to destroy bridges across the Aisne River greatly helped the Germans advance twelve miles in one day.[72]

The unenlightened leadership of the French Sixth Army greatly assisted the German efforts at Chemin-des-Dames, but when the Germans faced an enemy arrayed in depth, as other French units were, the Germans could not achieve such dramatic tactical success. The Allies continued to stall the German advances, and the Germans expended their irreplaceable attack divisions in their vain efforts to get the strategic breakthrough.

By August 1918, despite impressive territorial gains—by First World War standards—he German Army was exhausted. It had not broken the Allies and had not obtained the strategic breakthrough, despite several impressive tactical victories. The Allies, with superior resources, now took the initiative. Once again the Germans were on the defensive, now in a more desperate condition from the losses caused by their offensive. They also occupied large salients and now defended ground they had not had time to prepare. The Allies, especially forces of the British Empire, now displayed greater tactical finesse in their attacks than they had shown in previous years, using short artillery bombardments and integrating large numbers of tanks and aircraft in well executed attacks.[73] The German Army was no longer the effective force to stop these offensives. When it appeared to OHL that political, economic, and social conditions in Germany were going out of control, causing the German Army itself to be barely controllable, the German military leaders (now the virtual rulers of Germany) agreed to a cessation of hostilities. The Imperial German Army and Germany itself had been worn down by the Allies. That the army itself had not been crushed on the battlefield would create the frustration and bitterness of the "stab in the back" sentiment.

Tentative Generalizations

It is hazardous to give too much credit to any tactic al doctrine; the conduct of battle is often very decentralized. Yet, doctrine exists to give order to these efforts. Despite the German defeat in the First World War, the German efforts in tactical doctrine deserve close attention. In the development and application of new tactics for their army, the Germans generally displayed superior ability. The German doctrine achieved the balance between the demands of precision for unity of effort and the demands of flexibility for decentralized application. With clearly stated principles, the doctrine provided thorough, consistent guidance for the training, equipping, and organizing of the army. However, this consistency was not rigid, for in its battlefield application, the doctrine provided sufficient flexibility to accommodate the demands of local conditions and the judgment of several commanders. In examining this accomplishment some tentative generalizations are apparent.

Methodology was a factor in German success. No tactical concept remained in the isolation of pure theory. The better German tacticians judged ideas according to the actual environment in which they would be applied. Their evaluation considered all influential factors: the condition of German forces, the enemy situation, weapons, terrain, space, and time. No tactical concept was a thing-in-itself with inherent strength: concepts crossed the gap from theory to reality. For example, the counterattack was not valuable simply because it was a "counterattack"; a counterattack would be valuable if it were delivered at the proper time by well-trained units on known terrain against a confused enemy. The Germans did not neglect the cause and effect relationships. They did not lull themselves into a sense of satisfaction by simply coining a catchword or catchphrase. Their tactics were viable principles to adapt to the battlefield, not impressive labels to hide ignorance. It is perhaps instructive to note that the German offensive tactics of 1918 did not receive a catchy name until the Allies tried to give them one (which was inaccurate, anyway).

The habit of considering the cause and effect relationships when developing tactical concepts made the Germans cautious and prudent about change. They did not advocate change for its own sake; they recommended change when conditions demanded improvement. The Germans know how thoroughly change had to be imposed before it would have the desired effect. Therefore one can understand why Lieutenant Colonel Lucas of the French Army, in his postwar study of tactical change, lamented that the French possessed many valuable prewar regulations, but ignored them in the war. During the war, French tactical change was too often exclusively a function of a single dominant personality, as shown, for example, in the variation of French defense organization in the spring of 1918, depending upon the individual field army commander's adherence to the ideas of Foch or Petain. In the British Army, there were several examples of innovative commanders. Unfortunately, an unimaginative and often unreflective High Command did not seek better tactical solutions with sufficient determination and flexibility of mind; tactical change for the entire BEF lacked the breadth, thoroughness, and speed which OHL achieved under von Hindenburg and Ludendorff. The Somme has provided a clear example: the British are still remembered as the great sufferers at the Somme, but it was the Germans who were the better learners from the experience.

The Germans treated change with caution and respect. Once they decided that a tactical change was necessary, they pursued it with the knowledge that several factors had to be changed in order for the doctrinal change to have the desired effect. For example, this understanding of the breadth of change accounts for their great respect for training: no tactical concept was considered workable unless the army could apply the concept. The Germans always remained very conscious of their army's ability to perform. *An army that adopts tactical doctrine that it cannot apply will greatly multiply its misfortune.* The Germans recognized the considerable training effort that their tactical changes required. Only by a great devotion to training were they able to develop high standards of execution which made their doctrine successful and which earned a great reputation for their army.

In developing doctrine, the Germans always considered another critical factor, the enemy. Unlike Nivelle, who unfortunately acted as if the success of his plans were utterly independent of the existence of his enemy, the Germans respected their enemies. The German consideration of the influential factors made the applications of their doctrine an art, not a science.

The tactical principles were guides for the exercise of good judgment in unique situations, not formulas to eliminate the need for good judgment. While the various drills in the use of specific weapons and basic procedures were ingrained in the Imperial German Army through thorough training and repetition, the *application* of these techniques in the unique conditions of a battle was not done in a rigid fashion. The tactician was an artist who applied force according to the particular conditions of the terrain, the enemy, his own force, and his mission, using his own best judgment. Specific combat techniques or habits must be learned through rigid training so they can be repeated in a consistent manner irrespective of conditions. But tactics is the application of a variety of habits or techniques in combinations in the unique conditions of a specific battle. The difference between techniques and *tactics* is significant: to instill techniques requires inflexibility and repetition; to develop a sense of tactics requires flexibility, good judgment, and creativity.

The German consideration of all influential factors created tactical concepts that encompassed the total battle. The positioning of forces for either offense or defense was based upon depth. The tactical principles themselves, both offensive and defensive, emphasized the physical depth of the battlefield and the engagement of the total enemy force. In their new tactical doctrine, the Germans avoided excessive emphasis on the struggle at the forward edge, where forces initially collided. The defensive principles discarded the rigid belief that the defended space must remain inviolate. The enemy attack penetrated the defended space, but the depth of the battlefield weakened the attacking force, preserved the defender, and enhanced the defender's success of retaliation through counterattack. In their offensive principles, the Germans did not aspire to achieve total destruction at the thin area of initial contact; they used firepower and maneuver in a complementary fashion to strike suddenly at the entire enemy organization. The offensive and defensive principles did not regard the enemy as an impediment or irritant to the methodical seizure or holding of terrain. The enemy force was the fundamental objective.

The process of developing principles to obtain this objective was a collective or corporate effort. Individual talents and personalities were essential, but the doctrine emerged in an atmosphere where ideas were discovered and shared, not invented and arbitrarily imposed. OHL solicited ideas and experiences from subordinate units, and this genuine interest gave the final product the wide ownership that eased the acceptance and application of the doctrine. There was also a remarkable tolerance of dissent within the process, but this tolerance did not weaken the determination to succeed. Certainly the German military leaders did not lack substantial egos, but their process of developing tactical doctrine transcended individual egos. The German Army respected and used talent, including that of the enemy. High rank was not a prerequisite for talent. All large armies possess men of talent like Captain Hermann Geyer; few armies use such talent so efficiently.*

OHL directed the talent of Geyer and others to derive principles from combat experiences. These principles were sufficiently general to apply to a variety of tactical conditions, but sufficiently precise and specific to insure common understanding and unity of effort. Their flexibility was their strength, for these carefully and accurately developed principles could be modified without being discarded.[75] Evidence from the battlefield was more respected than the doctrine, both in development and execution. Therefore, the process of deriving the doctrine was inductive, and the application was in the same inductive spirit. Too often on the Allied side, tactics originally derived from experiences (either accurately or erroneously) became *deductive* formulas indiscriminately deemed appropriate for any situation, despite contradictory evidence or changed conditions. Nivelle's offensive was a tragic example. Tactical methods used successfully in a specific context, such as the Verdun counterattacks in late 1916, became universal formulas for success in the spring of 1917. The result was disaster physically *and* emotionally, for the formulas had been applied with such certainty. The Germans never attributed such certainty to their doctrine. This degree of uncertainty fostered a healthy curiosity and mental flexibility. No evidence was rejected or ignored simply because it did not "fit" the preconceived scheme. Therefore the Germans were often more receptive to new evidence or ideas than their Allied counterparts.

In his memoirs, Crown Prince Rupprecht expresses this warning: "There is no panacea. A formula is harmful. Everything must be applied according to the situation."[76]

For the Germans all tactical solutions were tentative: the Germans developed tactical doctrine inductively and applied and refined it in the same spirit. This process still demands much talent and ability, and it still requires a deliberate search for evidence. Glib solutions do not replace hard work.

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* Geyer's remaining life and career had a bitter twist. Geyer was a *General der Infanterie* (equivalent of U.S. lieutenant general) in World War II, but he influenced the First World War much more as a captain. In World War II, Geyer commanded the IX Corps and received the Knight's Cross in June 1940. However, after Geyer's participation in the invasion of Russia in 1941, Hitler deprived him of his command, along with other highly respected officers, for little apparent reason. For the rest of the war his status was "awaiting orders." He committed suicide in 1946.[74]

Notes

Introduction

1. Wilhelm Balck had written extensively on tactics before the war. During the war he served as a division commander. His son, Hermann Balck, was a company-grade officer in the First World War, and became an outstanding field commander in the Second World War.
2. Wilhelm Balck, *Development of Tactics—World War,* trans. by Harry Bell (Ft. Leavenworth, 1922), p. 14. Wilhelm Balck's son, General Hermann Balck of the Second World War, writes of his father, "He was the last great tactical theorist, but also a practioner," from Hermann Balck's memoirs, *Ordnung im Chaos* (Osnabruck, 1980), p. 5.
3. Hermann von Kuhl, *Der Weltkrieg,* 2 vols. (Berlin, 1930), 2:9.

The Offensive Tactics of 1918

1. Martin Middlebrook, *The Kaiser's Battle* (London, 1978), p. 20.
2. Von Below's order, as recorded in *Österreich-Ungarne Letzter Krieg*, vol. 6, p. 501, quoted in Ronald Seth, *Caporetto: The Scapegoat Battle* (London, 1965), p.146. Erwin Rommel fought as a captain at Caporetto in a Wurtemberg mountain infantry unit, and won the *Pour le mérite* for his actions there. Rommel has described his First World War experiences in a book, *Infanterie Greift An,* published in 1937. While the book is an excellent description of company tactics and small unit leadership, I do not feel that it represented the epitome of assault tactics in the First World War (I feel the storm units do), nor do I believe that Rommel's book foreshadowed the concept of blitzkrieg, as some have suggested.
3. S.L.A. Marshall, *The History of World War 1,* (New York, 1964), p. 215.
4. Crown Prince Wilhelm, pp. 169, 172; Balck, pp. 4, 79; Lucas, p. 72.
5. Crown Prince Wilhelm, p. 292.
6. Wynne, p.57. Wynne's claim is particularly damaging to the British, for the U.S. Infantry Association translated Laffargue in 1916. Another influential captain, B. H. Liddell Hart, wrote in his memoirs (1:26) that in 1916 he had written a pamphlet on his experiences as a company commander, which the War Office had refused to publish for security reasons.
7. Renn, p. 110.
8. Andre Laffargue, *The Attack in Trench Warfare*, translated for the *Infantry Journal* (Washington, 1916), p. 6.
9. Laffargue, p. 37.
10. Richard M. Watt, *Dare Call It Treason* (New York, 1963), p. 91.
11. *Ludendorff,* 1:401, on introduction of light machine gun.
12. Wynne, p. 58. I have not yet seen evidence which would connect Laffargue's ideas with the techniques of Nivelle, but the similarities make such a connection possible.
13. For example, Sixth German Army, *Use of Artillery in Combat Against Tanks*, 25 March 1917, trans. the American Expeditionary Forces from an earlier French translation (U.S. Army War College, 1918).

14. *British Official History,* 1917, vol. 3, p. 177.
15. C.R.M.F. Cruttwell, *A History of the Great War 1914–1918,* 2d ed. (Oxford, 1936), p. 476.
16. *Ludendorff,* 2:112.
17. Crown Prince Rupprecht of Bavaria, *Mein Kriegstagebuch,* vol. 3, p. 193.
18. *British Official History,* 1917, vol. 3, p. 221, see footnote. Donald J.
19. Goodspeed, *Ludendorff: Genius of World War I,* (Boston, 1966), p. 244.
20. German General Staff, *Der Angriff im Stellungskrieg,* 1 January 1918, trans. B.E.F. Intelligence as *The Attack in Position Warfare* (G.H.Q., 1918), p. 12 (26 January 1918 Amendment). Hereafter cited as *Attack.*
21. *Attack, p.* 10 (26 January 1918 Amendment).
22. *Attack, p.* 4.
23. Laszlo M. Alfoldi, "The Hutier Legend," *Parameters* 5, no. 2 (1976): 69–74.
24. Balck, p. 266.
25. *Attack, p.* 7.
26. Balck, pp. 62, 81, 91; Lucas, pp. 43, 102.
27. *Attack, p. 5.*
28. *Attack, p.* 16.
29. *Ludendorff,* 2:206.
30. Gruss, pp. 65, 90, 121.
31. Gruss, p. 73.
32. Gruss, p. 101; Middlebrook, pp. 54–55.
33. *Ludendorff,* 2:205.
34. Georg Bruchmüller, *The German Artillery in the Breakthrough Battles of the World War,* 2d ed. (Berlin, 1922), trans. J. H. Wallace and H. D. Kehrn (U.S. Army Field Artillery School, Ft. Sill, n.d.), p. 41.
35. Bruchmüller, p. 65. His successful use of his techniques on a large scale in 1916 was at Tarnopol, July 1916. See Wynne, p. 294.
36. Bruchmüller, p. 72.
37. Bruchmüller, p. 70.
38. Balck, p. 244.
39. Bruchmüller, p. 74.
40. Bruchmüller, p. 43.
41. *Ludendorff,* 2:238.
42. Georg Wetzell's memorandum as quoted in *The Causes of the German Collapse in 1918* by R. H. Lutz, trans. W. L. Campbell (Stanford, 1934), p. 16.

    According to Professor H. Deutsch of the U.S. Army War College, who interviewed Wetzell in the interwar years, Wetzell favored defeating Italy first, but Ludendorff favored attacking on the western front.
43. *Ludendorff,* 2:200.
44. Balck, p. 13; Crown Prince Wilhelm, p. 295; *Ludendorff,* 2:209.

45. Crown Prince Wilhelm, p. 295; Gruss, p. 121.

46. Jünger, p. 240.

47. Ibid.

48. Von Kuhl, *Genesis, Execution, and Collapse of the German Offensive in 1918,* trans. U.S. Army War College (Washington, 1933), pt. 2, p. 28. Hereafter cited as *Genesis.*

49. Ludendorff, 2:206.

50. Bruchmüller, p. 48.

51. Herbert Sulzbach, *With the German Guns,* trans. Richard Thonger (London, 1973), p. 141.

52. Sulzbach, p. 179.

53. Von Kuhl, *Genesis,* pt. 1, p. 70.

54. Ibid., p. 72.

55. *Ludendorff,* 2:203.

56. Von Kuhl, *Genesis,* pt. 1, pp. 72–75; Balck, p. 277; Wynne, p. 321.

57. *Ludendorff,* 2:68, 73; see also Erich Ludendorff, *The General Staff and Its Problems,* vol. 2, trans. F. A. Holt (New York, 1934). This contains a copy of the document, "Outline of a Scheme of Patriotic Education for the Troops," issued by OHL, 29 July 1917.

58. Extract from OHL principles of leadership as recorded in Lutz, ea., *The Causes of the German Collapse in 1918, p.* 16.

59. Von Kuhl, *The German General Staff, p.* 345; *Ludendorff,* 2:345.

60. Balck, p.17; *Ludendorff,* 2:248. The British had kept a leader reserve for their attacks since 1915. See Spears, p. 584.

61. Von Kubl, *Genesis,* pt. 2, p. 33.

62. Martin Middlebrook, *The Kaiser's Battle* (London, 1978), p. 147.

63. Middlebrook, p. 148.

64. Middlebrook, p. 153.

65. *British Official History*, 1918, vol. 1, p. 166. Despite the tactical success, the 1918 German offensive had many strategic flaws. Ludendorff used two army groups (Rupprecht's and Wilhelm's), instead of placing the attacking army groups in one command. He also shifted the German efforts to five different sectors from March to July, rather than pressing home in one sector.

66. *British Official History*, 1918, vol. 1, p. 159, 162; Middlebrook, pp. 155, 156.

67. *British Official History*, 1918, vol. 1, p. 39; Correlli Barnett, *The Swordbearers* (New York, 1964), pp. 297, 298.

68. Middlebrook, pp. 309, 322. Caution: These totals are not as "even" as they seem. Several wounded Germans eventually returned to fight in 1918; the British prisoners did not.

69. Horne, p. 64, footnote.

70. Von Kuhl as quoted in Lutz, *The Causes of the German Collapse in 1918,* p. 71. As the failure of the German offensive became apparent in July 1918, Ludendorff lost his confidence and his nerve and began to turn on his staff. Von Lossberg (p. 344) described a painful scene in which Ludendorff bitterly criticized Wetzell for having failed to judge correctly the fighting capacity of some German units that had recently performed poorly. Ironically, Ludendorff was losing control over his ego.

71. Wetzell as quoted in Lutz, p. 19. The looting, which also had occurred during the Cambrai counterattack, was an indication that, despite the efforts of OHL, discipline in the German Army was becoming fragile.

72. Barrie Pitt, *1918: The Last Act* (New York, 1963), p. 147.

73. The Australian forces under General Sir John Monash were particularly effective tactically in 1918.

74. Heinz Guderian mentions General Geyer in *Panzer Leader*, trans. Constantine Fitzgibbon (London, 1952), pp. 184, 185, 272. I am indebted to Lieutenant Colonel Boege, Bundeswehr Exchange Officer to the United States Military Academy, for obtaining information on General Geyer from the register of recipients of the Knight's Cross.

75. *British Official History*, 1917, vol. 1, is an example of an Allied view of the war which was reluctant to recognize the flexibility of the Germans in tactics.

76. Rupprecht, vol. 2, p. 270.

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Reading 2

THE DEFEAT OF IMPERIAL GERMANY
1917–1918

Rod Paschall

Maneuver by Riflemen: The American Campaign

German officers had criticized the lack of tactical proficiency among the American Marines' leadership at Belleau Wood, and a similar comment about U.S. Army leadership was made by British soldiers. The observation was made by the officers of the veteran British Fifteenth (Scottish) Division upon relieving the U.S. First Division a little to the north of the American Marines. The First Division had been in the thick of an eighteen-division counterattack that caused Ludendorff to call off his final offensive in Flanders and resulted in a fighting German withdrawal from the Marne salient to a position not far from where their third drive had begun. The British noted

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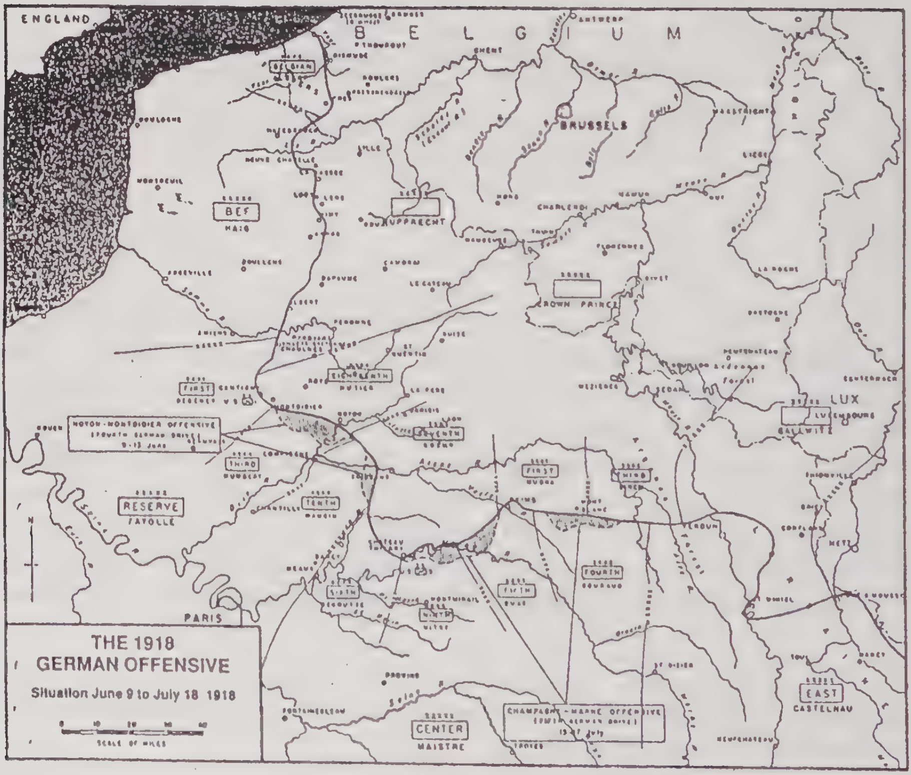
the American dead lying in rows on the battlefield, indicating costly human-wave attacks. It appeared to be a terrible waste of good men.

In visiting American units, Haig had privately remarked that, although the young U.S. officers and their soldiers were "active and keen to learn," some of the senior American officers were "ignorant of their duties." The British were particularly astute observers of the U.S. Army. They conversed easily with the American rank and file, and they could reflect back to two years earlier when they had quickly raised their own "New Army." Haig muffled his criticism. More than all the others, he knew the real meaning of fresh Allied units on the Western Front. And despite its shortcomings, the U.S. Army had an unabashed enthusiasm and drive that could be contagious. In the coming months, the Allies would need all the esprit, energy, and elan they could muster.

Now, pushed back deep in their own territory, the Allied leadership began to formulate an overall strategy. For the time being, the effort would clearly be to reduce the threatening salients that had been produced by Ludendorff's spring offensive. The midsummer of 1918 would therefore be spent in counterattacks aimed at regaining lost territory. There was little discussion or controversy about this immediate task. The enemy intrusions were vulnerable, inviting attack. The Germans must not be given the time to construct formidable defenses in their newly won positions. The Allied generals were as alert as ever to the possibilities of a negotiated end to the war. The less French and Belgian soil occupied by the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FOURTH
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THIRD
SEVENTH
EIGHTEENTH
CENTER
MAISTRE
EAST
CASTELNAU
CHAMPAGNE-MARNE OFFENSIVE
PARIS
THE 1918
GERMAN OFFENSIVE
Situation June 9 to July 18 1918
SCALE OF MILES

Germans, the more favorable would be the Allied bargaining position. The summer would be devoted to recovering lost ground.

The step beyond that, the Allied strategy for the fall, was now the special province of the senior Allied military authority, Foch. Several factors shaped his thinking. The foremost consideration centered on achieving the best political position for the Allied cause. That led the French general to insist on a continuous military offensive—all summer and through the fall. Once the Germans began to give up their gains, Foch believed, they must not be allowed to pause, to reorganize, to reconstitute and strengthen themselves.

The idea of a continuous offensive was, in 1918, somewhat novel. Military thinking was accustomed to planned battles that were limited by time and geography. Foch, however, became so wedded to the idea of a continuous offensive that he began to speculate that the war might be won in 1918. Coming from any other general, such a projection would be put down merely as an understandable but ill-founded encouragement to subordinates. Foch, however, was beginning to acquire a reputation for unfailing intuition.

A more objective analysis could not sustain such optimism. The Allies, might have demonstrated an ability to slow and finally stop a German offensive, but there was little evidence to suggest that they could develop and maintain an offensive of their own. Even if the Germans were pushed back, it would be into the awesome defenses of the Hindenburg Line. Breaking that barrier would require the use of vast Allied resources. Then there were intelligence reports indicating that Ludendorff was bringing several more divisions from Russia to the Western Front, as well as all seven German divisions that had been employed heretofore in Italy. There was also a growing Allied industrial problem. Shortages of coal and iron had not only diminished the shipment of U.S. troops, but had placed the production rate of artillery ammunition behind the rate of spring and summer consumption. The Allies were becoming so desperate for iron that Foch had to advise the dismantling of British and American railroads; French industry could no longer supply the new rails needed for increasing lines of communication in France and Belgium. Finally, there was the ominous matter of manpower. The influenza epidemic had begun to wane, but the Allied counterattacks had been costly. American battle casualties per unit had been high in July, but Pershing still had few divisional-sized organizations in the fighting; the prime concern was over British and French casualties. The French were losing men at the rate of 112,000 per month, and the British loss rate was at about 70,000 per month. The British were now drafting men up to fifty years of age. Pessimists within Allied ranks had plenty of fuel for their arguments.

Foch, however, did not depend on mere hope and intuition. He countered the German Western Front reinforcement from Italy with the withdrawal of four of the six French divisions there and two of the five British divisions, adding to his force for the fall campaign. He even persuaded the reluctant Italians to send two of their own divisions. The sum of the Italian front redeployment had Foch one division up on Ludendorff.

He then attempted to check the flow of German troops westward from Russia. To pin down as many of his enemy's troops there as possible, he enthusiastically encouraged a doubting President Wilson to send American forces into the revolution-plagued land. His plea to the U.S. chief of state was wrapped in a piece of logic that he labeled "a decisive military argument." It worked. (The Russian scheme was destined to be of doubtful utility, an action that Americans prefer not to remember but one that Russians seldom forget.)

To cap it all off, Foch persuaded a willing Pershing to request a larger goal for the ultimate size of the American army in France, one hundred divisions in 1919 instead of the existing eighty-division plan. He then gathered the Allied leadership together on July 24 for a general planning session, a meeting that he used to imbue the French, British, and American senior commanders with a vision of final victory.

The enthusiastic French general began the conference with a relatively optimistic assessment. Foch claimed that they were now facing two armies, the well-trained but lightly equipped shock army that Ludendorff had prepared for his recently failed offensive, and another army, designed for defense. The leader of the Allied armies claimed that the shock army was spent, and the other force was being used up in the ongoing Allied counterattacks. Although not quite equal to their enemy in the number of divisions employed, the Allies were actually reaching a superiority in the numbers of combat battalions and reserve forces. The time was at hand, Foch declared, to consider an all-out offensive, one that would position the Allies for ultimate victory in 1919. They should help themselves in the severe iron and coal situation by aiming their offensive at German-occupied French and Belgian industrial districts, adding to Allied might while subtracting from the German industrial capacity. He concluded his appraisal with his firm belief that the reduction of the German salients must be extended to a campaign in which the enemy faced a succession of attacks that would prevent him from withdrawing barrier material, ammunition, and supplies.

The general's performance was wholly dedicated to inspiring a spirit of offense. It was vintage Foch. The supreme commander then asked the Allied leaders for a response. The reply was not encouraging. Haig, whose forces had been battling since late March, said his units were now disorganized. Petain's appraisal was darker yet. The French leader described his army as "anemic," "worn out," and "bled white." The only glimmer of hope came from Pershing. The American claimed his elements were capable of fighting, although he warned that they were still in the process of being formed.

Despite the general air of caution, however, Haig, Pétain, and Pershing agreed with Foch that the only reasonable course of action was the continuation of the Allied counterattacks at the enemy salients and a transition into a general offensive. To lose the initiative once again to Ludendorff would have too many disadvantages. So, even though still without anything approaching superior numbers, with a critical industrial shortfall, and with no demonstrated ability to sustain an offensive, the Allied leaders set about mounting an attack.

Foch established the overall parameters for the offensive. The immediate actions were to be aimed at reducing the salients. Planning would be directed at final victory in 1919, when Allied numbers might weigh heavily. The fall 1918 offensive would feature a general advance in the center by Petain's French forces, along with two aggressive and powerful thrusts, one in the north under Haig and another in the south by the Americans. A single bold thrust was never seriously considered, since that would be met by a similar concentration of Ludendorff's defense forces. The northern and southern arms of the offensive were to be aimed at securing industrial and transportation advantages. The British and American drives were therefore targeted on rail centers, coalfields, and iron deposits deep in the German rear. Although the outcome of the July 24 conference was perhaps predictable, there was at least one novel feature: there would be an American campaign.

Up to now, American troops had been fighting under British or French command, executing plans and using tactics that were compatible with those of the European units on the flanks. Pershing was in the process of creating the First Army headquarters, an organization designed to formulate and supervise American plans—plans intended to facilitate American doctrine, use American organizations, and take advantage of American training. Submitting to the coaching of French and British officers, Pershing's officers had patiently waited their turn. In private they had often criticized their European tutors, declaring that their allies were obsessed with the safety of trenches and cowed by enemy machine guns, and that they had become fatigued by Western Front conditions that produced an inordinate degree of reliance on artillery. The American style of fighting would break the tactical deadlock and force the enemy out of the trenches and into open warfare; it would be a brand of combat that would see maneuver, rifle marksmanship, and rapid advance. To the Americans, it was going to be a different kind of war.

Some observers believed it already *was* a different war. Shortly after General Foch had his conference, a young British staff officer, Cyril Falls, a man destined to become one of the historians of the conflict, noted in his diary that if the Allies' forthcoming offensive failed after Ludendorff and his German infantrymen had shown how an attack was to be mounted, the British, French, and Americans might as well give up. For this young captain, the German spring offensive had clearly demonstrated a new and proven offensive method. Never before in this dreary, entrenched conflict had so much ground been covered so rapidly. In the end Ludendorff had been unable to sustain his drives, but the new German doctrine had pointed to methods that were worthy of emulation.

The Americans thought otherwise. American doctrine was based on the 1917 Field Service Relations, which were hardly revised from the prewar 1911 version. The manual specified that the attack should be conducted under the conditions of fire superiority, with advance achieved by infantry rushes.

Fire superiority was to be gained by accurate rifle fire. For the Americans, the bane of Western Front attackers—the machine gun—was viewed as a "weapon of emergency." Although the light machine gun had become the heart of German offensive doctrine, the American system gave it little notice. Machine guns were to be treated as obstacles, weapons to be destroyed by concentrated rifle fire. To be sure, artillery would assist the infantry, but the soul of an American assault was the rifleman.

The major readjustment that the U.S. Army had made in order to deal with the conditions of the Great War was in its huge divisional structure. Pershing had observed that European forces had often been forced to relieve their smaller divisions in the midst of an attack, thereby losing momentum and allowing the enemy to reinforce the threatened area. He insisted on a much bigger American organization, one that could sustain losses and press home an attack to reach open ground. Once there, Pershing believed the "independent character" of the American soldier would prevail over any adversary. To express the special American way of war, Perishing and his officers constantly used the catchphrase "open warfare." In sum, U.S. theory had three components: American independent character, superior riflemen, and a divisional organization especially created to absorb punishment in overcoming trench defense systems.

Not surprisingly, the American theory dominated the leadership of the newly created First American Army, despite an occasional flicker of doubt. One consistently raised concern was Pershing's dissatisfaction with the actual quality of the rifle marksmanship he found among his troops. This produced a flurry of messages back to the United States demanding better training. Unfortunately such messages were usually accompanied by others demanding accelerated troop deployment. Then, too, there was the matter of American performance in raids and patrols. General Robert Lee Bullard, commander of the most experienced U.S. unit, the First Division, had noted in the early spring of 1918 that although the U.S. "tradition of Indian and partisan warfare" should have made raiding and patrolling an "American specialty" actual practice indicated otherwise. Patrol and raid leaders had to be selected carefully, and their troops had to be rehearsed and practiced prior to engaging in these kinds of operations.

These two cautionary indicators—poor marksmanship and the need for careful selection and training of patrol and raiding parties should have rung some alarm bells in an army that was basing its tactics on superior riflemen and "independence of character," but there was no indication of serious doubt at the higher levels of the U.S. command.

There was also the U.S. notion of "open warfare." One of the American combat leaders, General Hunter Liggett, observed in April 1918 that he could find no definitive U.S. instructions on open warfare. There was little doubt that all the U.S. officers talked about it, but when one attempted to find precise doctrine for its execution, the existing literature was a bit thin. Liggett made his concern known to Pershing's headquarters, and action was eventually taken. New doctrine was published—after the war was over.

In August the staff of the American First Army had little time to revise doctrine. Formally activated on the thirteenth of that month, the new headquarters supervised a massive consolidation of U.S. divisions on the right flank of the active portion of the Western Front, 120 miles east of Paris. The movement of the Americans was a complex matter. During the German spring offensive, U.S. divisions had been plugged in where they were momentarily needed. As a result, fourteen of twenty-nine American divisions were in the French zone, five were in the British sector, and the remainder were in various stages of preparation. Nine of these American units had been involved in the fighting to reduce enemy penetrations, and had already sustained 50,000 casualties. Although Pershing would have preferred to consolidate all of his forces within the newly designated American sector, he yielded to Haig's argument that two U.S. divisions should stay in the north for the biggest of the planned Allied offensives. Two more joined the general reserve. The critical American shortage of transport greatly inhibited Pershing's planners.

The initial American-directed offensive was aimed at the surprise reduction of the St. Mihiel salient, a German-held, protrusion that had existed since the early days of the war, and that interrupted direct French rail traffic from eastern industrial areas into Paris. It was in a quiet sector, usually defended by seven German divisions on line, with two additional divisions in reserve. The American staff calculated that the Germans could reinforce the salient with two more divisions in forty-eight hours and another two in seventy-two hours. Since the enemy held high ground overlooking the Meuse River valley on the northwestern face of the salient, the southern face became the selected area for the main American attack. The target date for the assault was September 10.

Pershing's First Army took over the St. Mihiel sector from the French on August 28, but the American commander still needed help from his allies. In addition to his own units, Pershing commanded four French divisions, a welcome role reversal for the Americans, many of whom had long been under French command. General Pétain also assisted Pershing by providing about half the tank crews for the 267 French light tanks, and 900 aircraft and pilots for the armada of approximately 1,500 airplanes scheduled to support the attack. The French also supplied a healthy percentage of the 3,000-piece artillery force that was being quietly assembled in the sector. All told, Pershing would have about 550,000 Americans and 110,000 Frenchmen involved in the operation. The great majority of the manpower was going to be American, but the material of war was almost wholly the product of the prodigious French armaments industry. There would be no U.S.-made aircraft, artillery pieces, or tanks on the battlefield.

The American design for the operation was simple and straightforward. While the French staged a holding action at the nose, the Americans would attack the two flanks of the salient. The assault on the northwestern shoulder of the enemy position would avoid the German-held high ground at the nose of the salient. This attack was the secondary effort under the American Fifth Corps, commanded by General George Cameron, who would have the U.S. Twenty-sixth and Fourth divisions as well as one French division. The main effort was to be on the southern flank of the salient, and would be conducted by two U.S. corps. The First Corps, under the command of General Liggett, had four U.S. divisions: the Eighty-second, Ninetieth, Fifth, and Second. On Liggett's left stood the U.S. Fourth Corps under General Joseph Dickman. This element had the First, Forty-second, and Eighty-ninth U.S. divisions. Additionally, there were six divisions in reserve.

Pershing's First Army staff, a large one of about 500 officers, had learned the vital nature of logistical preparation for a major offensive, and they planned well for the St. Mihiel operation. The attacking forces not only required support in their assembly and initial assault, but would need prepositioned resources to be used during the conduct of the offensive. This entailed 100,000 tons of crushed rock to lay or repair roadbeds, 295 miles of railroad line stock, the designation (and in some cases the construction) of facilities for 21,000 possible hospital patients, 40,000 tons of ammunition, and myriad other important considerations. Despite a host of complications, preparations appeared to be falling into place-until two major and disappointing events occurred.

The first setback had to do with resources; the second involved the entire strategic concept. Colonel George C. Marshall, an operations staff officer on whom Pershing increasingly relied, learned on August 24 that the British would not provide heavy tanks for the American assault. Only French light tanks would be available. The heavy tank was not only a powerful antidote for the machine gun, but a recognized device for coping with barbed-wire obstacles. The Americans would have to improvise.

The second blow came six days later and was directed at General Pershing himself. Arriving on August 30, Foch closeted himself with the American commander and began a carefully reasoned argument for a complete change in the American offensive. The concept involved a shift in the offensive from St. Mihiel to an area sixty road miles north and west, between the Meuse River and the Argonne Forest. The idea would require division of the American forces that were just now being brought together, and a diminished role for the new American command.

"BlackJack" Pershing listened as long as he could, then angrily replied to Foch. There would be no further division of U.S. forces. The United States recognized Foch as the senior Allied military authority, and would go to any area so ordered—but as a complete American force, commanded by an American officer, and to a U.S.-controlled sector. Foch pressed his case, saying, "I must insist." Pershing stood his ground, barking back, "You may insist all you please," but not yielding. Foch departed in a huff, leaving behind an unresolved, contentious issue and a steaming American general.

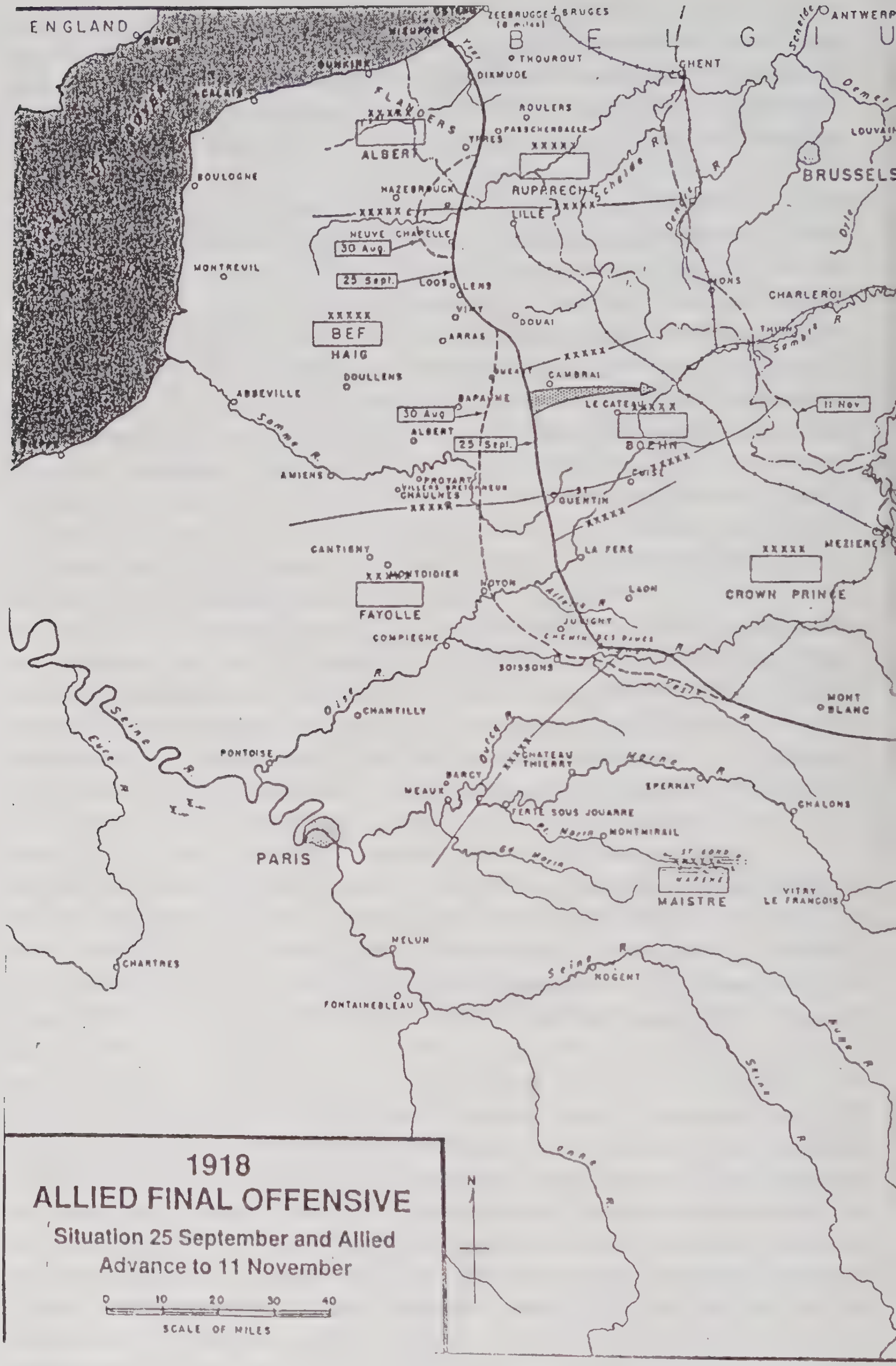
The essence of Foch's reasoning was that the American drive should start much farther to the north, closer to the vital parts of the German rear. Why not, for instance, let the Germans continue the defense of the St. Mihiel salient? It absorbed enemy troops, troops that could not be used to defend a more important sector. Besides, if the Americans started their drive well to the south, as presently contemplated, it would be some time before they could fight their way north. To the French general, all of this seemed reason enough to revise the plan.

Command and control issues aside, Pershing's reasoning conflicted sharply with that of Foch. It would take a considerable amount of time to pull units out of the gathering concentration at St. Mihiel. If Foch was concerned about continuous pressure on the Germans, he should consider lost time to be an intolerable enemy. However, that was not all. There was a sound operational factor to consider. The St. Mihiel salient lay on the right flank and rear of the proposed offensive in the Meuse-Argonne sector. What if the Germans allowed the new scheme , to begin, and then used the St. Mihiel sector as a base to cut in behind the American offensive to the north? To the American commander, elimination of the St. Mihiel salient was an essential preliminary to the Meuse-Argonne operation.

The two generals did not allow the impasse to last. Both men gave ground. Although Pershing's plan for St. Mihiel was not allowed to stand unchanged, he did retain the authority for a consolidated U.S. command operating in a U.S. sector. But he would also have to conduct the Meuse-Argonne operation. The compromise involved limiting the time and depth of the St. Mihiel operation. The Americans were only to pinch off the salient, not continue the drive beyond it. After the reduction they would rapidly shift forces to the Meuse-Argonne and begin an attack there. All of this was to be done in the same month, September.

The immediate result was that Pershing's headquarters, still absorbed in the details of its first major operation, would have to begin concurrent planning for another large task. Because they used many of the same resources, the two undertakings had to be carefully coordinated. For any of the Allied armies the compromise solution would have involved a considerable military feat. For the Americans, with an inexperienced staff, it would be a tall order indeed.

Soon a third problem arose. An element of the planned French support, heavy artillery, could not be moved into place on schedule. For those American staff sections dealing with the new Meuse-Argonne plan, the delay seemed a disaster—there would be two days less to transfer units and supplies from St. Mihiel to the Meuse-Argonne. For those sections dealing only with St. Mihiel, however, it was a blessing, providing forty-eight more hours of planning time, much of which was devoted to the vexing problem of breaching enemy wire obstacles. Operating without the support of British heavy tanks, the Americans did not want to turn to the favored Allied alternative, a week-long "wire-cutting" artillery preparation. American tactical philosophy inclined to the sudden and violent surprise attack. George Marshall and his crew of young operations officers worked eighteen hours a day to find solutions.



1918
ALLIED FINAL OFFENSIVE
Situation 25 September and Allied Advance to 11 November

ENGLAND
DOVER
CALAIS
DUNKIRK
NIEUPORT
OSTEND
ZEEBRUGGE
BRUGES
BELGIUM
THOUROUT
DIXMUDE
GHENT
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ROULERS
PASSCHENDAELE
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FLANDERS
ALBERT
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30 Aug.
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LOOS
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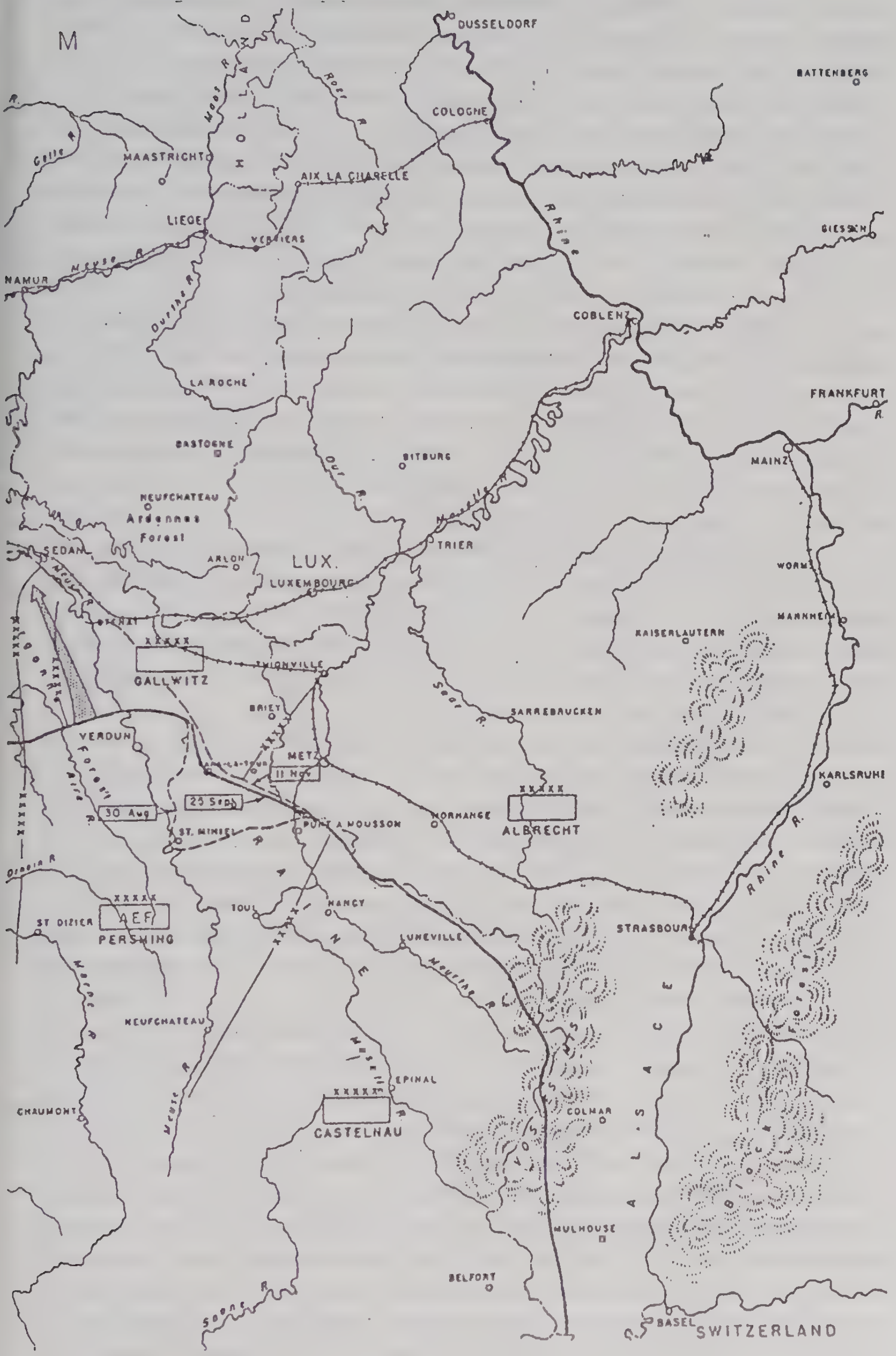
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TOUL
AEF
PERSHING
ST DIZIER
STRASBOURG
LUNEVILLE
Meurthe R.
Marne R.
ALSACE
NEUFCHATEAU
Black Forest
VOSGES
Moselle R.
EPINAL
Meuse R.
CHAUMONT
CASTELNAU
COLMAR
MULHOUSE
BELFORT
Saone R.
BASEL
SWITZERLAND

Days before the massive September 12 American infantry assault, the scheme for the St. Mihiel operation began unfolding in accordance with a planned sequence of events. The first actions were centered on the French town of Belfort, one hundred miles to the southeast of the German-held salient, a city not far from the German border and the Black Forest. There an American officer took a hotel room in the town and set up a typewriter. Typing out two copies of a piece of correspondence suggesting a forthcoming American troop concentration near Belfort, the officer tucked away the completed letter in his tunic, deposited the carbon paper in the wastepaper basket and went downstairs for a leisurely stroll. On his return to the room, he noted with satisfaction that the carbon paper had been removed from the basket.

Simultaneously, several U.S. radio detachments arrived near Belfort and began a series of coded messages back to the American headquarters. At the same time, a small element of American tank crews unloaded their light French tanks at a rail siding near the town and began driving the machines along the open edges of wooded areas, ensuring that the tracks would be clearly visible from the air. The bait was taken. Three German divisions began entraining for Mulhouse, twenty-five miles east of Belfort.

At 1:00 A.M. on September 12, 1918, the relative tranquil of the St. Mihiel salient, which had lasted for three years, was shattered by an enormous eruption of flames and shells. Three thousand artillery pieces began a four-hour pounding of German positions. At 5:00 A.M. thousands of American riflemen surged forward. Seventeen months after declaring war, the United States was at last launching its own offensive.

The enemy wire obstacles were overcome with bewildering speed. Each attacking unit seemed to have its own particular method to effect a breach, and every conceivable way was used to go through or over the wire. The novel techniques seemed to work—one and all. One method was not used: prolonged wire-cutting artillery fire. In some spots the bangalore torpedo, a long pipe filled with explosives, was rammed under a mass of wire, with the following explosion clearing a path. In other areas the American infantrymen carried folded mats of chicken wire to the obstacle, threw the mats on top of the German barbed wire, and simply walked across. There were even instances where the Americans physically tromped down the wire and passed beyond. Some units paused to use vintage wire cutters from the Spanish-American War. In other areas the attackers threaded their way through occasional gaps in the barriers. The lack of heavy tanks was soon forgotten.

Once past the wire, the U.S. infantrymen in the main (or southern) attack found the forward German positions lightly manned, or else discovered that the devastating artillery storm had done its grisly work. When the main defense works were reached, American casualties began to mount—but not for long. It was now daylight, and one amazed German soldier watching the U.S. attack described it as being conducted with "praiseworthy indifference" to danger. The Americans kept coming—and coming in astounding numbers.

In some areas of the main attack, the Americans had pounced on the defenders with such speed that they found their enemy still in bunkers, awaiting the final shells of the American and French artillery. That was the case with Sergeant Harry Adams of the Eighty-ninth Division. Spotting a German soldier darting into a bunker, the game Adams followed him, but the door slammed in his face. The eager American had almost exhausted all of his ammunition in the attack. He was down to his pistol—and had only two bullets left at that. Without hesitation (or perhaps forethought), Adams fired both rounds into the door. Essentially unarmed at this point, the determined sergeant shouted out an authoritative demand for surrender to his prey. The door cracked open. A timid German soldier appeared, hands held high. Adams waved his captive out of the doorway, the empty pistol thrust menacingly forward. Another German followed the first out of the bunker—then another, and yet still more. After Sergeant Adams had gathered his three hundred prisoners together under the rather impotent threat of his useless pistol, he became somewhat apprehensive about his own security. Nevertheless, without losing his stern and soldierly bearing, he herded his charges to the rear. At one point the horde of Germans with their obscure captor was mistaken for a massed German counterattack, but Adams and his small percentage of the kaiser's legions finally reached safety.

The main attack had gone well. The second day's objectives were almost all taken on the afternoon of the first day. To the north, however, the secondary attack had not matched the success of the main attack. The Germans fought harder there, since the attack was aimed nearer to the base of the salient and close to a vital supply corridor for the defenders. Only one unit of the U.S. Twenty-sixth Division gained its first day's objective by afternoon, and that only after the division's reserve was thrown into the fighting. The other elements of the secondary attack had ground to a halt far short of the planned advance. When Pershing learned that enemy troops were beginning to evacuate the salient, he quickly realized that a nighttime pause in the offensive might result in his enemy's escape. Grabbing the telephone, he ordered a night attack, with the goal of effecting a linkup with the main attack forces by dawn. The American commander was now demanding that the entire salient be pinched off in twenty-four hours.

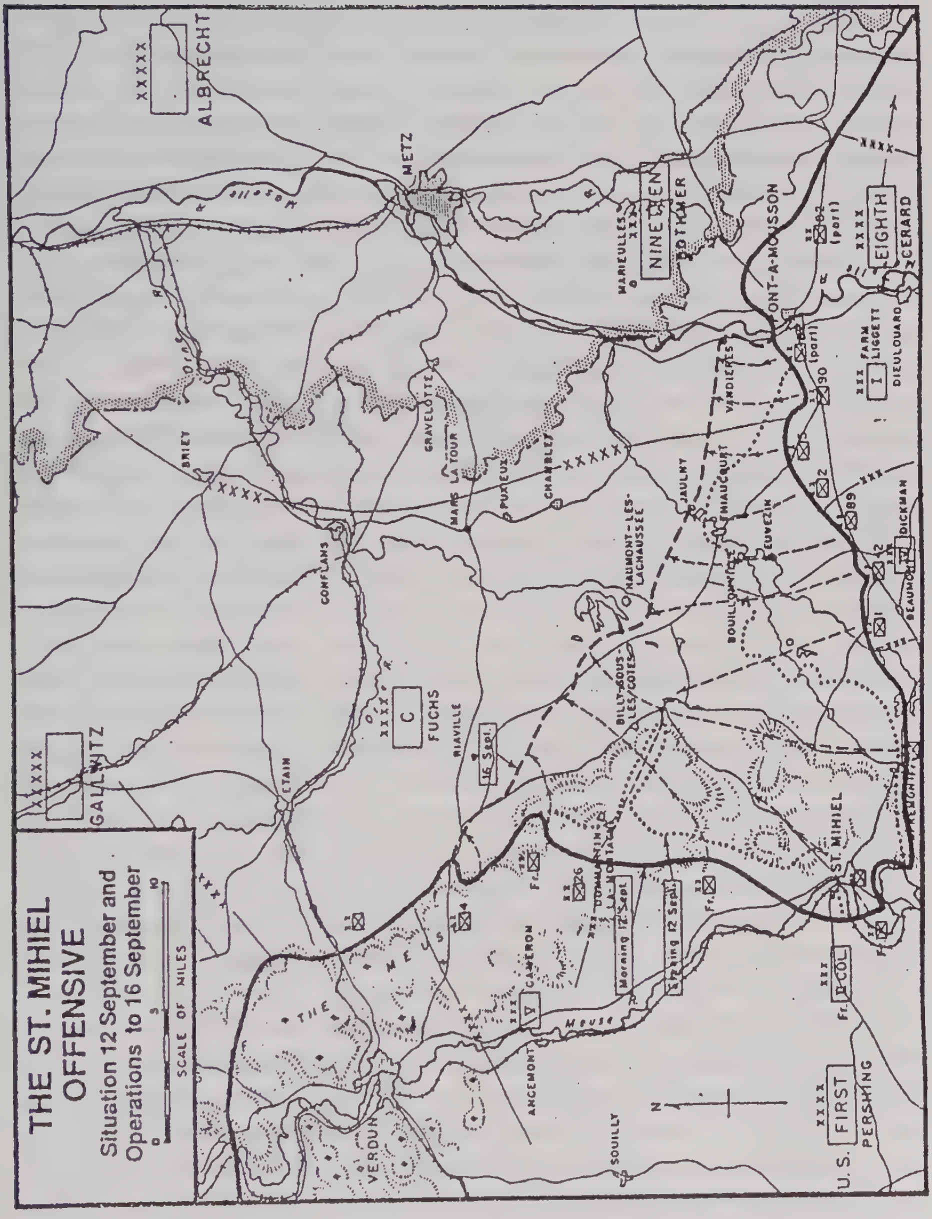
The veteran Twenty-sixth Division sent its weary 102nd Infantry Regiment into the gathering darkness, on toward a front that had thus far successfully resisted the Allied assault. The hastily arranged plan was the soul of simplicity: an attack up a road in a narrow column. To the surprise of defender and attacker alike, the roadway was not blocked. The flanks of the road were defended but not the road itself. The American infantrymen marched forward, reaching the designated linkup point at a little past 2:00 A.M. on the morning of September 13. Along the way they captured an entire German ammunition train. A little before dawn, elements of the First Division arrived, closing off the route of escape for any enemy unit south of the juncture. Pershing's decisive intervention had paid off.

The American air arm had to contend with bad weather during the ground offensive, but its work was not wholly contingent on events below. The American race-car driver Eddie Rickenbacker had by now improved his ability to spot enemy aircraft. Flying a single-seater French fighter, the young captain was on patrol over the northeast part of the salient when he saw four German fighters closing in on a flight of American piloted bombers returning from a raid over Metz. Climbing into the sun, Rickenbacker turned and dove his craft to the rear of the pursuing enemy, noting the well-known markings of Richtofen's old organization on the German planes. Catching the trailing fighter unaware, the American brought down the plane in a hail of machine-gun fire. Rickenbacker managed to elude the German pilot's three revenge-seeking comrades and save the bombers from probable destruction at the same time. It was his sixth "kill." There would be twenty others before the captain returned to the United States.

German observation balloons were a constant concern of the American attackers. The U.S. air service was hard pressed to destroy the balloons, since they were invariably well protected by antiaircraft defenses. If the balloons were allowed to float uncontested, enemy observers would have been amply warned about the forthcoming American attack. Moreover, elimination of the balloons was just as important after the attack, when the American and French troops established a defense. The better the German observation reports, the more casualties via German artillery. Fortunately, American, French, Italian, and Portuguese pilots in Colonel Billy Mitchell's air element for the St. Mihiel operation were becoming skilled in making rapid and deadly passes at the balloons. One of the best pilots at this dangerous game was Lieutenant Frank Luke. Luke got one balloon on the first day of the assault, two more on September 14, and another pair on the sixteenth. The lieutenant's big day was on September 18: two more balloons and three German fighters to boot. Luke would not return home.

On the ground the American offensive had ended less than forty hours after it had begun. The base of the salient had been reached, and that was the agreed-upon point at which the switch to the Meuse-Argonne deployment would begin. Some of the American officers believed the overall plan was flawed and that the original American concept should have been followed. With the Germans on the run, why not keep the momentum and continue the attack? One such officer, Douglas MacArthur, a brigade commander in the Forty-second Division had slipped forward on the night of September 13 to a position well within what the Germans should have been defending. Seeing the fortress of Metz, MacArthur claimed his brigade could have pressed on for many miles.

On the surface, a continuation of the St. Mihiel operation appeared to be a sound idea, following the military dictum of reinforcing success. And there seemed to be a wealth of success to reinforce. The bag of prisoners was large. The short American attack had netted over 16,000 German and Austro-Hungarian captives. The haul of enemy weapons was also impressive: 443 artillery pieces and 752 machine guns. Two hundred square miles of French territory were



THE ST. MIHIEL OFFENSIVE

Situation 12 September and Operations to 16 September

0 5 10
SCALE OF MILES
XXXXX ALBRECHT
XXXXX GALLWITZ
METZ
Moselle R
NINETEEN BOTHMER
MARIEULLES
PONT-A-MOUSSON
82 (part)
XXXX EIGHTH GERARD
DIEULOUARD
XXX I LIGGETT FARM
90
VANDIERES
2
89
XXX IV DICKMAN
42
1
BEAUMONT
BRIEY
Orne R
GRAVELOTTE
MARS LA TOUR
PUXIEUX
CHAMBLEY
JAULNY
THIAUCOURT
EUVEZIN
BOUILLONVILLE
HAUMONT-LES-LACHAUSSEE
CONFLANS
C FUCHS
RIAVILLE
16 Sept.
BILLY-SOUS-LES-COTES
ETAIN
ST. MIHIEL
XXX Fr. II COL
XXXX U.S. FIRST PERSHING
SOUILLY
VERDUN
ANCEMONT
XXX V CAMERON
THE MEUSE
Meuse
Morning 12 Sept.
Evening 12 Sept.
DOMMARTIN-LA-MONTAGNE
26
Fr.
4
N

liberated, and the rail line from Paris to northeastern France was no longer imperiled. The American doctrine seemed to be sound. The big divisions emerged from the fighting showing little need for relief. The American staff, no doubt with the British and French in mind, crowed that casualties had been light, only about 7,000 men. Congratulations poured in to the commander, Pershing.

On the evening of September 13 when he was certain all of the operational objectives had been achieved, Black Jack Pershing took a few moments to relax and enjoy the accolades. Reflecting on the success, he confided to his intelligence officer, Brigadier General Dennis Nolan, that the reason for the American triumph lay in the superior nature of the American character. Americans were the product, he said, of immigrants who had possessed the initiative and courage to leave the Old World. They were the descendents of those who had the drive, intellect, and daring to make a mighty nation out of a wilderness. Americans had the willpower and spirit that Europeans lacked. With military training equal to that given a European, the American soldier was superior to his Old World counterpart.

Even as the two American officers were speaking, however, evidence began to trickle in to headquarters that should have taken much of the euphoria out of Pershing's attitude—if the evidence were considered objectively. Through prisoner interrogations and captured documents, it was learned that the American attack had been staged against forces that were already in the process of withdrawal. The retreat had begun on September 10, big guns first, and the Germans had no heavy artillery within range of the attack. Although the defenders had forecast an offensive against the salient, their higher headquarters had not thought the area important enough to reinforce. Reserves had been positioned far to the rear, incapable of executing the standard German defense doctrine of immediate counterattack. Total withdrawal had been ordered as early as noon on the day of the attack. The barbed-wire obstacles had not been maintained for some time, a prime reason they were so easy to overcome. Some of the stakes held up little more than fragile belts of rust. Many of the prisoners taken came from the same unit, an Austro-Hungarian division that had little intention of carrying on the war. Numerous members of this unit simply slung their rifles over their shoulders and marched forward, looking for someone to accept their surrender.

An objective analysis would also have considered battle information derived from the Americans themselves. The American boast of light casualties was right—but only if the consideration was restricted to the amount of ground taken. Pershing's pronouncement of about 7,000 casualties did not take into account the French under his command, and was obviously meant to include only two days of major offensive action. Even then, the casualty rate of 3,500 per day exceeded Haig's accurate prediction of his expected loses for a major offensive prior to the bloody Passchendaele push of 1917. In the next two days, during the consolidation phase, the Americans took over 3,000 more casualties.

An unbiased appraisal of losses would also have considered the intensity of the resistance. In the case of St. Mihiel, the enemy's retreat had as much to do with his desire to withdraw as it did with American pressure to do so. The optimistic conclusions drawn by the U.S. military leadership could be put down to inexperience—but there were Americans who had experience now. Some of the "old-timers" in the U.S. First Division did not regard the St. Mihiel affair as much of a battle. It was an American victory, but along with the elation it should have provoked concern.

Despite the pressing need to set the wheels in motion toward the Meuse-Argonne operation, First Army headquarters did conduct a brief, shallow analysis of the the St. Mihiel operation. The results produced several important conclusions: first, there had been severe traffic congestion and confusion on the primitive road net supporting the offensive and second, there had been poor coordination between American units. The traffic problem was a serious one. An inability to sort out the priorities between infantry reinforcement, ammunition supply, artillery displacement, and casualty evacuation could cripple further offensives actions. The liaison and coordination problem was just as serious. Combat efficiency depended on the ability of one unit either to support or else get out of the way of another unit. Pershing concluded that better training for the traffic control element was essential to rectify the first deficiency, and that more detailed instructions in operations orders were needed to enhance coordination between his forces. The basic American tactical doctrine, however, was not questioned.

Traveling at night in order to avoid enemy air reconnaissance, American units and logistical convoys made their way northward behind French lines to join in the Allies great fall offensive. Pershing's army would be on the right flank of the French Fourth Army, and together their thirty-seven divisions would form the southern thrust that complemented Haig's massive assault in the north. The ultimate southern objective, the city of Mezieres, was located in the French-designated sector, about forty miles behind the thirty-six German divisions that were facing Pershing and his ally. Allied possession of this town would sever the vital German lateral rail line that serviced the great majority of Ludendorff's Western Front forces. Success in the southern advance would give the Allies important industrial facilities and deprive the Germans of a considerable amount of resources. There could be little doubt about the importance of the forthcoming offensive. It was not likely that the enemy would voluntarily withdraw this time, as they had from the St. Mihiel salient.

The Americans were taking over twenty-four miles of the front from the French, and the overall plan dictated an eventual U.S. occupation of about one-third of the entire Western Front, or about ninety-four miles. The idea was to feed in the incoming U.S. forces on the right of the French Fourth Army as they became available. Plans were already being drawn up to create another

American army headquarters, the U.S. Second Army. Pershing would then become an army group commander and another officer would take over his duties with the First Army. The Meuse-Argonne offensive would therefore carve out the left flank of what was to be a large American sector in France.

The Meuse River formed the initial right extremity of the U.S. attack sector, and the Argonne Forest lay within the left extremity. The main American thrust would be made between the two, in the watershed of the Meuse and Aire rivers. The rolling terrain there was badly churned up and pockmarked from previous fighting around Verdun. During most of the action the Argonne Forest would overlook the main attack corridor, so that the eastern wood line would have to be occupied and dominated by U.S. units. The veteran Twenty-eighth Division was picked to handle this important task.

Possibly the most notable feature of the entire area was a missing element: adequate transportation arteries. There were only three roads in the region that ran parallel with the American direction of attack. Nine U.S. divisions would be using those roads—and that was counting only the front-line infantry formations that were to lead the assault.

Only four of the attacking divisions had any appreciable combat experience; the other five had not even completed their training. Three of these latter divisions had yet to receive their artillery units, and had to be provided with hastily arranged fire-support formations. Fifty percent of the untried Seventy-ninth Division was composed of enlisted men who had been in uniform for only four months. The Fourth, Twenty-eighth, and Seventy-seventh were veteran divisions, but the Seventy-seventh had to be fleshed out with infantry and was destined to receive four thousand riflemen who had been drafted in the United States in July. These new men would arrive only two days before the assault. Clearly Pershing was not putting his best foot forward for the grand offensive. How had it happened?

When Pershing was directed to plan for the Meuse-Argonne operation, he was already committed to St. Mihiel. There he had placed his experienced units in the lead, using his untried divisions for the reserve. Because the reserve force for St. Mihiel had not been used, it therefore remained untested. Three of those units could be shifted rapidly to the Meuse-Argonne sector, and they were. Several U.S. divisions were in the final stages of training during the St. Mihiel operation. Although they would not complete their training in time for the Meuse-Argonne operation, they were at least uncommitted, and therefore were used.

In essence, the First Army staff, having just received the order for the Meuse-Argonne operation on September 7, threw what appeared to be the most available units. Since the attack was to be made on September 26, the staff had to work quickly. It was a matter of expediency.

The Meuse-Argonne operation was going to be bigger than the one at St. Mihiel, yet in some ways the support for the operation would be less than that used for the first U.S. effort. The perception of ally and enemy alike was that Black Jack Pershing was in command of a rapidly growing, strong army. In reality some facets of that force were showing increasing weakness with each passing day. In addition, there was less planning time that at St. Mihiel: only nineteen days. At St. Mihiel there had been about 1,500 aircraft under Billy Mitchell's direction. For the new operation, only 820 aircraft, 600 of them flown by Americans, would participate on the Allied side. This time there would be only 189 tanks, 25 percent of them with French crews. There was more artillery—some 3,980 guns—but it could not all be brought to bear for the initial assault. More American troops were to be involved; about 600,000 would move into the sector. But these numbers were rapidly being eroded by the mystifying influenza. Beginning in early September, the epidemic returned with a vengeance. American hospital admissions climbed to almost 40,000 for that month. And this wave was deadly. About 2,500 of Pershing's soldiers died from this incurable malady in September. Both figures—hospital admissions and the death toll—far exceeded the wounded and killed for St. Mihiel.

The American intelligence estimate projected that five German line divisions were facing the nine U.S. assault divisions on the first day. Fixed defenses consisted of three well-maintained, well-constructed defense lines about one or two miles apart. Villages interspersed throughout the area had been heavily fortified. Carefully camouflaged machine-gun positions were often present in the basements of houses. While the number of German divisions on the line facing the Americans would be less than at St. Mihiel, the enemy reinforcement capability in the Meuse-Argonne was far greater. General Nolan's intelligence officers predicted the five enemy line divisions would be reinforced with four more in twenty-four hours, two more the second day, and there could well be a surge on the third day of nine additional divisions. If the intelligence estimate was correct, within ninety-six hours of the start of the offensive Pershing's men could be facing twenty German divisions.

To better the chances of success, Pershing and his First Army staff, now grown to 600 officers and 2,000 enlisted men, relied heavily on speed and stealth. The "Belfort ruse" had served well for St. Mihiel, but once fooled, Ludendorff might not be fooled a second time. The American general's intuition proved sound. The Germans actually expected to confront what Pershing *wanted* to do, not what he was *ordered* to do. The enemy staff was looking for the Americans to continue the St. Mihiel offensive. The night movement, front-line reconnaissance done in French uniforms, and other precautions designed to mask the replacement of 200,000 French troops with 600,000 Americans, largely worked, so that Ludendorff was not fully aware of what was about to take place in the Aire Valley. In order to beat those nine third-day German reinforcement divisions to the draw, Pershing directed his planners and commanders to gain about ten miles on the first day. That would put the lead divisions through the successive defense works and into the open ground. Once there, the American infantry was expected to be in its own element.

The First Army plan was once again a simple one. The artillery preparation, one hour shorter in duration than at St. Mihiel, was scheduled to begin at 2:30 A.M. on September 26. There would be less firepower—2,700 guns, used for less time—but the American strong card was thought to be its infantry, and less delay between the start of the artillery preparation and the beginning of the assault would enhance the chances of surprise and minimize the effect of early enemy reinforcement. In order to ensure that the Twenty-eighth Division would secure the wood line overlooking the valley to the east, Lieutenant Colonel George S. Patton's tank brigade was assigned to the First U.S. Corps, which had the attack corridor including both the Argonne Forest and the Aire River. The Seventy-seventh Division formed General Liggett's First Corps's left flank, joining the rightmost element of the French Fourth Army.

Patton's 140 tanks would be advancing with the Twenty-eighth Division on one side of the Aire, as well as supporting the right flank element of the corps, the Thirty-fifth Division, on the other side of that river. General Bullard's Third U.S. Corps would form Pershing's right flank, attacking with three divisions. The rightmost division of this corps, and thus Pershing's easternmost unit, was the Thirty-third Division, which would be attacking up the west bank of the Meuse River. On the left of the Thirty-third Division was the Eightieth Division, and on its left was Bullard's last assault unit, the experienced Fourth Division.

General Cameron's Fifth U.S. Corps would make the main attack and was emplaced in the center, between Liggett's and Bullard's corps. The three divisions of the Fifth Corps, from left to right, were the Ninety-first, Thirty-seventh, and the Seventy-ninth. Cameron had no rivers or major streams in his attack corridor or on its flanks, but there were a number of wooded areas, villages, and a few hills. The most prominent hill that the Fifth Corps had to contend with initially was a spot called Montfaucon (mount of the falcon), about five miles behind the German front line. Montfaucon was in the Seventy-ninth Division's sector, Cameron's right flank unit.

On September 26, at 2:30 A.M. the United States Army began its greatest battle to date. At 5:30 A.M. infantry and tanks moved forward in a dense mist made all the more murky by smoke and gas shells. In the main, surprise had been achieved and the forward German positions were lightly held. Through the first two or three hours there were few reports from the front. On the left, however, the Twenty-eighth Division was encountering great difficulty in the Argonne Forest. Trees had been knocked down by the artillery fire, forming obstacles for the attackers and welcome barriers for the defenders. Patton could hear the Twenty-eighth Division's fighting, and the sounds of his tanks with that unit on his left. Across the river, in the Thirty-fifth Division sector, he waited impatiently, but no reports from his tank crews came in. Gathering his party together, he picked up his long walking stick (a device used to gain attention of his men inside their noisy machines) and marched forward toward the sound of battle. It was 6:30 A.M.

Soon the American tank brigade commander met a disorganized group of Thirty-fifth Division infantrymen walking in the rear. Stopping them, he learned that they had lost contact with their units in the most and smoke. Adding them to his party, the determined lieutenant colonel continued his advance. Soon the mist began to lift and the group found themselves within range of a number of German machine guns. During the next three hours Patton would release a carrier pigeon with a report to his superior, organize digging parties to get tanks past ditches, direct his vehicles against enemy machine-gun positions, and lead a somewhat foolish two-man attack against one of these positions. While he was busily involved in the Thirty-fifth Division sector, his elements across the river with the Twenty-eighth Division were experiencing considerable problems in their first encounter with German pillboxes in the wood line. Patton was wounded in the leg and turned over his command to his most aggressive battalion commander, Major Brett. While being helped from the battlefield, he concluded that the Thirty-fifth Division was not doing well at all.

Although the left flank of the attack was falling far behind the scheduled advance, at least one unit with the right flank corps was pressing ahead. The Fourth Division had held together in the mist, and when the weather cleared it found itself about a mile and a half beyond, but to the east of, the key terrain feature, Montfaucon. The division's leadership could see that the prized position was still in German hands, but it was in the designated sector of the Seventy-ninth Division, and the detailed instructions cautioned them to stay in contact with flank units. So the Fourth Division settled in, awaiting the advance of the Seventy-ninth.

By late afternoon the offensive was far behind expectations on the left flank and about on schedule on the right. But what of the main attack and Cameron's Fifth Corps? The experienced U.S. units had a saying about the rolling barrage supporting an assault: "Keep your nose in it." In other words, follow it closely, so that you will be on the enemy machine guns before the German crews can react. The Seventy-ninth, an untried and partially untrained unit, had not learned that the prime support in the attack was not concentrated rifle fire but artillery. The new unit had lost the rolling barrage in its advance, and it paid the price. By 9:00 A.M. the lead regiments of the division were pinned down and without artillery support. A French tank unit was sent to assist the stalled division, but the renewed attack ground to a halt on the edge of Montfaucon at dusk. At the same time, Major Brett began counting his losses. Between enemy action and mechanical failure, he had lost 43 of his 140 tanks. With the darkness, the lead elements of the first German reinforcement division began arriving on the battlefield. Pershing's optimistic goal for the first day's gain faded with the sun.

The next day the offensive was resumed against a now fully alarmed and reinforced German defense. Luck was with the defenders; it began to rain.

Brett threw in eleven tanks to assist the Twenty-eighth Division, but found that the enemy had begun a concentration of artillery batteries on the edge of the Argonne Forest, hitting the tanks and shelling the exposed American infantry in the open area to the east. The Seventy-ninth Division managed to take Montfaucon at midday, but could not manage a further advance. By holding on to the high spot, Ludendorff's defenders had gained thirty hours. To compound Pershing's difficulties, the fragile routes of resupply and reinforcement began breaking down. Some of the light artillery got forward, but ammunition supply became a severe problem. One traffic jam was seven miles long. Not much was gained on September 27. Brett was now down to eighty-three operating tanks, and the Germans, having built their strength to ten divisions, began counterattacking.

By September 28 the defenders had massed thirteen batteries of artillery in the Argonne wood line. The Thirty-fifth Division, a prime target of the German gunners, began to give ground and to disintegrate as a cohesive fighting unit. The game Seventy-seventh and Twenty-eighth divisions kept hammering away in the forest, but they were not getting much help from the French Fourth Army in the open ground to their left. The rain continued; the roads became nearly impossible to traverse; enemy counterattacks increased; casualties mounted; Brett lost another thirty tanks. The American offensive was slowing to a halt.

It had gone wrong. Even in the best of conditions it was doubtful whether nine divisions could be supported over such a poor network of roads. The Americans were tied to a simple but inflexible plan that called for attacking on line, anchoring flanks with the advance of neighboring units, and keeping within the confines of divisional boundaries, a system that the Germans had learned to abandon long before. Montfaucon should have been taken on the first day, regardless of assigned boundaries. The weather precluded much support from the air, and the initial delay allowed the defenders to bring in reinforcements, six additional divisions by October 3. Most of all, the attack clearly demonstrated that a good percentage of Pershing's army, and particularly its leadership, was not yet ready for effective offensive combat.

The American commander acted. Ordering only local attacks, Pershing began a complex replacement operation over the tenuous lines of communication. The Eightieth Division was pulled out of the line. The inexperienced Seventy-ninth Division was pulled out of action, replaced by the veteran Third Division, the organization that had put up such a stout defense on the Marne River during the summer. The battle-wise ranks of the "Big Red One," the First Division, pulled into the line, replacing the badly mauled Thirty-fifth Division. The Thirty-seventh Division was relieved by the Thirty-second Division, a unit that had been fighting since late July.

Not satisfied with replacing units, Pershing also replaced leaders. The axe began to fall on generals. Several division commanders were replaced. Cameron, the Fifth Corps commander, would be reduced to division, not corps command. For the first time, the American command faced a problem their allies had long known: finding suitable officer replacements. Pershing had lost 521 of his officers, killed in battle during September.

There was little time to make adjustments. Full-scale resumption of the offensive was scheduled for October 4. Prior to the second effort, Pershing was beset with several problems. The fighting in the Argonne Forest was developing into a confused, knock-down-drag-out affair. One group of about 550 Americans from the Seventy-seventh Division had been cut off from American lines and was fighting a desperate battle for survival. The transportation problem had become so acute that the American commander ordered his line-of-communications trucks to the front to serve as troop and ammunition transports. And then there was an unwelcome visit in the form of a French general officer, carrying a proposal from Foch. The idea put forth was that the tactical situation in the Argonne Forest could be solved by moving in the French Second Army headquarters with some French troops and placing the American units fighting there under French command. Pershing dismissed the proposal and concentrated on the forthcoming battle.

It began at 5:00 A.M. on October 4. This time the order permitted division and corps commanders to act independently within their sectors, discarding the notion that each organization had to maintain alignment with its flanking units. Slow, grinding, and painful progress was made, especially by the veteran divisions, but the cost was high. One battalion of the First Division, the Third Battalion of the Sixteenth Infantry, lost 18 of its 20 officers and 560 of its 800 soldiers.

The enemy was not the only cause of losses. During the first week of October 16,000 new influenza cases were recorded. The medical crisis caused Pershing to cut into his requested troop deployments from the United States in order to transport 1,500 additional nurses to the crowded American hospitals in France. All of these losses, whether stemming from the endless heavy combat or a surging epidemic, were cutting into the American army's combat effectiveness.

The isolated unit in the Argonne was finally reached. There were only 195 unwounded survivors from the initial contingent of 550. There had now been 75,000 combat casualties since the offensive began on September 26, almost all in the infantry. Reluctantly, Pershing ordered two of his least-ready divisions to be dismantled, with their members to be used as replacements.

Along with the word of losses came reports of great bravery and skill. The most highly publicized report dealt with an acting corporal of the Eighty-second Division, Alvin York. Leading a seventeen-man element against several German machine-gun positions, York captured a German battalion commander and his party, only to come under attack by the enemy. After losing about half of his men, York set out by himself to reduce the odds. One by one, the skilled marksman dispatched 28 of his adversaries and returned to pick up his prize catch. Leading the defeated German officer around, York persuaded him with his pistol to encourage his men to surrender. In all, the corporal netted 132 prisoners. For those seeking good news from the American sector, it was a banner day.

October 8 also marked the day when the American sector started to expand. The Thirty-third Division secured a crossing over the Meuse River and American units began to form an entirely new attack corridor. By October 12 the American front stretched for ninety miles, and the Second U.S. Army was established. At last a trickle of American-made munitions started to arrive in France: 75-mm artillery shells. The United States was playing a much larger role in the war.

Losses continued to mount. The First Division had taken 9,000 casualties in the first eleven days of October. Such numbers could not be replaced with any sort of speed. Despite the rising number of wounded and killed, the American soldiers continued attacking in the Meuse-Argonne sector, in some cases with astounding results.

Less publicized than the York feat of arms was the case of a professional soldier, acting Captain Sam Woodfill. A veteran of the Philippine Insurrection and the 1916-17 adventure against Pancho Villa in Mexico, the former sergeant found himself on October 12 leading a company of Fifth Division riflemen against several German machine-gun positions near the right flank of the First Army offensive. Pinned down by fire in the middle of an open field, the captain took matters into his own hands. Moving forward, he jumped in a shell hole and determined that the most serious threat was an enemy automatic weapon in a church tower about 200 yards away. Raising up, he quickly fired five rounds from his rifle. The fire from the church tower ceased.

The next threat appeared to be coming from a stable. Locating the gun position, Woodfill repeated his technique-firing five quick rounds with great accuracy. Success once more. Next came the grazing machine-gun fire across the open field. The weapon was concealed in a bushy area, and Woodfill realized he could not use his previous procedure. The deadly machine gun was directly in front of him. He dashed to another shell hole and then began crawling toward a patch of woods on the flank of the enemy position, barely escaping death from artillery and small-arms fire. Reaching a ditch, he worked his way within ten yards of the German gun. Spotting the partially hidden gunner, Woodfill shot him. One soldier after another took the gunner's place, and the captain kept firing until four replacements had been killed. A fifth soldier showed himself and paid the price. Seeing one more, Woodfill brought him down with a pistol shot.

Moving farther into the woods, the veteran soldier bumped into a German officer who made the fatal error of trying to grab the American's rifle and was shot then and there. Locating another machine gun and crew, the captain eliminated the crew with his now-proven method of picking off the gunner and his four replacements. Surprising two enemy soldiers, he sent them packing to the rear, hands up. Finding yet another machine-gun position, he repeated his technique—five more enemy soldiers died. Bringing his company forward, and still well in the lead, Woodfill was caught in a flurry of artillery shells. Diving into a nearby trench, he landed on top of two enemy soldiers. The ensuing tussle resulted in both Germans being killed—this time by their own pickax. With the enemy position now firmly held by his unit, the captain sent a messenger for reinforcements. His recommendation was disapproved. The company was "too far out front." So Woodfill withdrew from the hard-won ground and abandoned the penetration—the penetration of the Hindenburg Line.

Two days later the First American Army, under the command of General Liggett, began the next phase of the offensive. It was now facing thirteen enemy divisions in the Meuse-Argonne sector. The eight U.S. divisions were ordered to break the Hindenburg Line. Opposition stiffened even more. After forty-eight hours, on October 16 the Americans finally secured the objectives that Pershing had designated for the first day of the attack on September 26. Most of the original attacking divisions had been sent to the rear. The notion that the large U.S. unit could sustain its losses and continue an offensive had not proved out; in actual practice, the average length of stay at the front proved to be about two weeks. As both the Allies and the Germans had learned, divisions must be rotated out or the front in order to reconstitute, feed in replacements, and rest.

At this point, Pershing's problem was that there were not enough replacements to send to Bullard's Second and Liggett's First armies. Two steps were taken to provide an immediate solution. The American commander ordered a reorganization of the large American rifle company, reducing the authorized strength from 250 to 175 men. On the surface this appeared to be merely a paper solution, but in reality the order permitted units that had not been badly reduced by combat to transfer riflemen to divisions that were now seriously understrength at the company level. The reorganization also included measures to dismantle more divisions; the total number of divisions salvaged for replacements now stood at seven. Pershing also ordered an army wide crackdown on stragglers. There were thought to be about 100,000 men milling around the rear areas, either lost, confused, or shirking combat duty. Casualty replacement and filling in for the influenza victims became a major concern. By October 19 the Third, Fifth, and Eighty-second divisions were down to little more than 5,000 combat-effective infantrymen apiece.

The situation in the American sector did not escape the notice of the French political leader Clemenceau. The wily politician knew that Foch, in his position as the overall Allied military authority, had been in direct correspondence with President Wilson. Using his own political position, Clemenceau asked his countryman to take action seeking the replacement of General Pershing. The politician cited the heavy casualties being incurred by the Americans, and their lack of progress in comparison to the British attack in the north being commanded by Haig.

Clemenceau's motive may have been aimed more at diplomatic rather than military objectives. Serious negotiations were now under way with Berlin to end the war; and the basis for the exchange of notes revolved around President

Wilson's earlier proposals for peace. Undercutting Pershing and his independent army on the Western Front would diminish the American influence at the bargaining table. Clemenceau had little trust in the American president, and believed that the terms of peace must, above all, suit the needs of France.

It was now October 21. Foch could not ignore Clemenceau's request. The French general had seen much of the American army and its leadership in the past eighteen months. Prior to 1917, American combat experience had largely been limited to minor, punitive campaigns—operations against Indians, Philippine insurrectionists, and various armed Mexican contingents. Some U.S. generals had exhibited an ability to learn their duties in the wholly different arena of Western Front combat, but others had not. None of them had ever commanded the vast number of soldiers they were now attempting to lead. Despite the fact that America had been in the war for a year and a half, their army had been raised quickly—and showed it.

To Foch and his fellow officers, the deployment of the U.S. Army to France had seemed slow indeed. It was clear that the United States had been unprepared to wage modern warfare. The most prominent indication was the lack of American materiel; almost everything had to be given to them—artillery, tanks, airplanes, and machine guns. Once these were in their hands, the Americans had to be taught how to use them. All of this had taken time.

Then there was the matter of American tactical doctrine. There was no question that the individual American soldier fought, and fought well. But the types of attacks they were conducting were extremely costly. Their leaders appeared to have no concern for losses. The American assault was little more than a human wave into the face of German machine guns, a weapon that the Americans treated with contempt. Their doctrine favored the rifle, yet except for a few highly skilled marksmen their use of that weapon appeared to be little different than that of their European counterparts. They insisted on huge divisions, perhaps because they knew they did not have the officers to direct a larger number of more reasonably sized units. However, they were now in the process of reducing the size of these organizations. Pershing was also eliminating some of his more inept generals. And, most important, they were attacking. Losses or not, the Americans kept coming on.

Foch knew the matter had to be handled carefully. The relief of General Pershing might cause a serious and unfavorable reaction in the United States, where the American general was regarded as a hero. The American attack might be slow, but the U.S. offensive was absorbing a growing number of German divisions and, while the American casualties were high, Ludendorff's losses could not be light either. Another 257,000 American troops had arrived in September, and 180,000 were due to reach France during October. No one could replace the casualties being sustained on the Western Front at this juncture—except the Americans.

Reading 3

THE HIGH TIDE AND THE TURN THE WESTERN FRONT BATTLES OF 1918

British Army Review

Eighty years ago, on the 8th of August 1918, three Corps of 4th British Army—the Canadian, the Australian, and III British, supported on their right by the French 1st Army, launched one of the decisive battles of history, the Battle of Amiens. A truly combined arms operation, where artillery, infantry, armour, cavalry (horsed and armoured car) and air were integrated to a degree which still bears comparison with anything that has come after, it was an object lesson on the effectiveness of late-war British tactics and the competence of the BEF in putting them into practice. When it was closed down three days later, the Germans had been pushed back by eight miles, but more importantly, the will of their commander, Ludendorff, had been broken. From then until November the record of the British and Empire troops is one of unbroken success against an enemy who although not the power that he had been, still maintained a resolute and well ordered defence up to the moment of the Armistice, and succeeded in carrying out that most difficult of sustained operations, a long fighting withdrawal in contact. The German Army of 1918 never broke and fled in disorder as did its successor in August 1944. Nevertheless, by 11 November, just under one hundred days later, the BEF was back to its first defensive positions of the war at Mons.

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It was a great victory, arguably the greatest ever won by British arms, in that it compassed the defeat of the main enemy's main force in the decisive theatre of operations. Yet its eightieth anniversary will go almost unmarked; the Armistice will be celebrated in the usual muted and apologetic way, almost as the marking of a defeat. The majoritv of the British population, if it bothers to think about the Great War at all, remains in a state of denial; despite the efforts of the revisionist historians, the popular view remains that if the Germans somehow lost the war, it could not have been the fault of the British Army, and certainly not of its commanders. It may be argued that since Germany's collapse came from within and was driven by deprivation, the blockade was the most significant factor in bringing about the defeat. But blockade on its own is a desperately slow and unreliable method of bringing a nation down. In addition, the blockade must compel the blockaded to an unsustainable level of consumption, and the most direct way of doing this is to force him to fight a drawn-out high intensity war. The end of the Second Reich came because Germany's siege economy could not meet the demands both of maintaining effective forces in the field and of delivering even a subsistence standard of living to its population; strategic attrition is working when potato starch becomes more important as a feedstock for the chemical industry than as a foodstuff for the population. The effect was the erosion of both the material and the moral components of German fighting power.

Perhaps, however, the outcome of the Great War *should* be regarded as a defeat for the British at the national level— that is the level even higher than that of grand strategy. Certainly it led to an abdication of real power and the willingness to exercise it proactively. The British chose from 1918 to believe what they were told by the politicians, which group most certainly had a great deal to hide, and to elevate the output of the war poets to the status of history. Too many people had vested interests in talking down the victory, and the campaign in France and Belgium came to be regarded as a one-off aberration, never before experienced (which shows how selective is the British historical memory) and never to be repeated. The savage death toll of the war became in the national consciousness a uniquely British sacrifice, excusing the British from any further responsibility for the security of Europe. When trouble loomed in the 1930s, the British were content to shelter, as far as a land commitment was concerned, behind a France which had in truth suffered far more than Britain in the Great War, and had been more hollowed out by the experience. The price was to be paid in 1940, and afterwards.

Not only did the British population choose to forget the victories of 1918, but, less excusably, the Army lost sight of a number of big-war realities. Not least among these was an understanding of the fact that open warfare combined arms practices were not the exclusive preserve of the mechanized forces which it did not have (a lesson still relevant today). As a result, when the 1939 BEF deployed to France its tactical doctrine (such as it was) seems to have had more in common with 1915 trench warfare than with what came later.

With some commendable exceptions, it was 1943 before combined arms techniques reached a standard comparable with that of 1918.

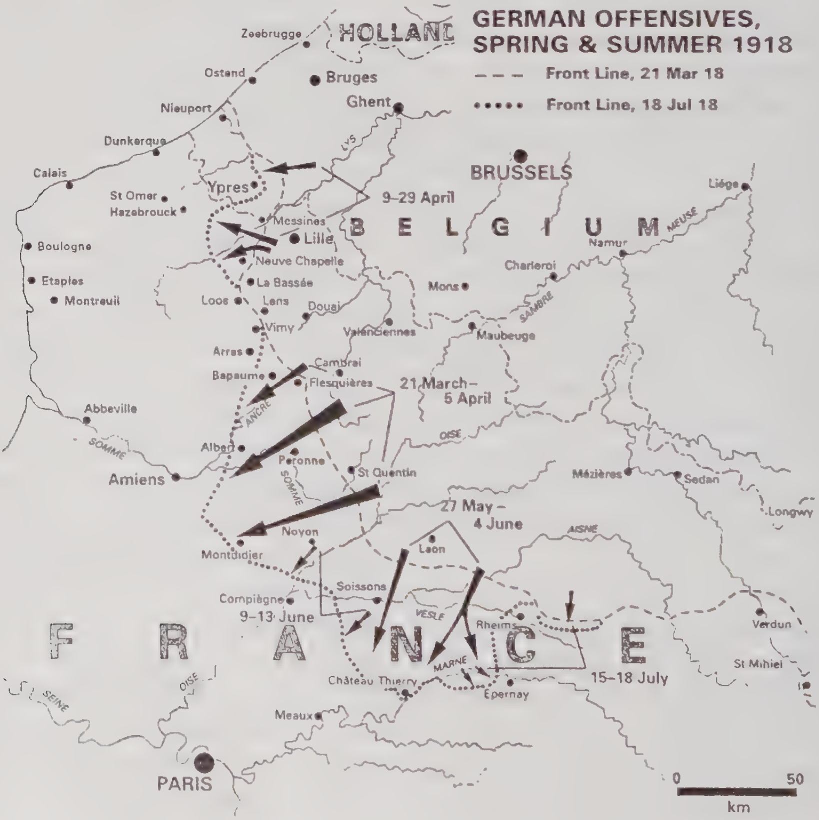
The 80th anniversary is a good time to revisit these events; within the limitations of a magazine article, briefly to recount the what, and also to pick over something of the how and why; and to pay some small tribute to the men of 1914-18. This a generalist article; the specialists will have seen it all before.

Before Launching into the story of the counter offensives of 1918 it is necessary to give some account of how the Allies came to be on the defence lines of July 1918, from which they would return to the attack.

For the Allies, 1917 had been a year that promised much and delivered little. The Nivelle offensive in the spring, hyped as the war-winner, had failed against its advertising but had actually delivered results more or less on a par with standard Western Front offensive performance. Unfortunately, disappointed expectations on the part of the French armies led to some mutiny and a lot of working to rule, to the extent that the French Army as a whole ceased to be any sort of offensive force for the remainder of the year. At the inter-Allied operational level, this placed the burden of responsibility for offensive action on the BEF. In the short term, it caused the British offensive at Arras, planned as a diversion and initially a brilliant success (proving just how much had been learnt in the Somme battles), to be kept open far too long. Not only did this produce the familiar effect of particularly heavy casualty figures not commensurate with anything gained, but the whole planning timetable for the year's offensives had to be put back. Messines in June was again successful, since it was the epitome of bite and hold with no exploitation. But the time lost at Arras was time gained for the Germans to enhance their fortifications in the Ypres salient. The extra week which [Hubert] Gough, commanding Fifth Army, insisted on for artillery preparation was the last week of the fine weather. This is not the place for any detailed description of Third Ypres; suffice to say that when the weather permitted, British artillery/infantry tactics were unstoppable in the initial penetration and consolidation, and admitted as such by the Germans. At Cambrai, the future—artillery firing unadjusted, and the potential of a large tank force superimposed on the standard tactics, was seen and shown to work—as were the Stosstrupp infiltration tactics employed in the German counterattack.

[Douglas] Haig had been subjected to extreme pressure by Lloyd George in the winter of 1916-17, which had led to the effective subordination of the BEF to Nivelle and to disruption of planning for the 1917 campaign. In the aftermath of Third Ypres, the Prime Minister, unable to summon up the courage (or perhaps, in the last resort, being too canny) to sack Haig, instead replaced [William] Robertson with the slippery Henry Wilson as CIGS. Lloyd George also determined to restrict Haig's ability to conduct offensive warfare by starving the BEF of manpower. This was indicative of his failure to appreciate the realities. With Russia effectively out of the war, thirty-five divisions would be released to reinforce the German armies in the West. During the winter of 1917-18, no Allied commander in France was thinking of anything other than defence for the coming months. Nevertheless, some half a million men were held back in the UK. Haig's preferred solution was to disband divisions; instead, he was ordered to reorganize existing divisions from a twelve- to a nine-manoeuvre battalion basis. At the same time, the BEF was ordered to take over an additional 45km of front from the French. The result was military chaos: a game of General Post as units redeployed across France, while GHQ tried to establish a new defensive doctrine and train a mass army accordingly, to take over a new sector, and to dig, concrete and wire the defence zones. Haig's wings were clipped yet further by the establishment of the Supreme War Council, but this provision of a mechanism for direction of the war at a combined level proved an essential element in later success.

On 21 March, barely a week after the last British battalions had completed their trek around France in search of their new divisional homes, Ludendorff's first offensive, MICHAEL, came in against the junction of the French and British Armies on the Somme, the attack falling in the British sector on the 3rd Army (Byng) and the 5th (Gough) . The latter was in the worse case. It was overstretched in frontage terms, and occupying new and unfamiliar


GERMAN OFFENSIVES, SPRING & SUMMER 1918

– – – Front Line, 21 Mar 18
••••• Front Line, 18 Jul 18
HOLLAND
Zeebrugge
Ostend
Bruges
Ghent
Nieuport
Dunkerque
Calais
LYS
BRUSSELS
Ypres
St Omer
Hazebrouck
9–29 April
Liége
Messines
Lille
B E L G I U M
MEUSE
Namur
Boulogne
Neuve Chapelle
Charleroi
Etaples
La Bassée
Mons
Montreuil
Loos
Lens
Douai
SAMBRE
Vimy
Valenciennes
Maubeuge
Arras
Cambrai
Bapaume
Flesquières
21 March–
5 April
ANCRE
Abbeville
OISE
SOMME
Albert
Peronne
Amiens
SOMME
St Quentin
Mézières
Sedan
27 May–
4 June
Longwy
AISNE
Noyon
Laon
Montdidier
Soissons
Compiègne
9–13 June
VESLE
Rheims
Verdun
F R A N C E
St Mihiel
15–18 July
OISE
MARNE
SEINE
Château Thierry
Epernay
Meaux
PARIS
0
50
km

ground. More even than the other armies, the 5th had needed time; time to prepare the defensive zones, time to train formations, units and individuals in defensive tactics, and time for the staffs to learn how to control a battle involving mobile defence principles, with the possibility of withdrawal. Time had not been available.

By this stage of the war, artillery could produce such a weight of effective fire in a short time that it was essential to thin out the troops in the indirect fire zone well below the densities prevalent in 1916 or earlier, and to rely on defence in depth, counterattack, and defeating the enemy within, as opposed to in front of, the position. This thinning out provided the opportunity for infiltration tactics to work. Earlier defences based on '*one line and a strong one*' had prevented infiltration in any strength, but were no longer practicable in the face of 1918 artillery. The British tactics of grouping the troops remaining in the forward zone into company-based positions aided the attack by producing wider gaps than did the German practice in defence of defending the forward zone with a machine-gun screen (this was one unforeseen effect of creating the Machine Gun Corps). Worse still, counter-attack forces were sited too far back for timely intervention.

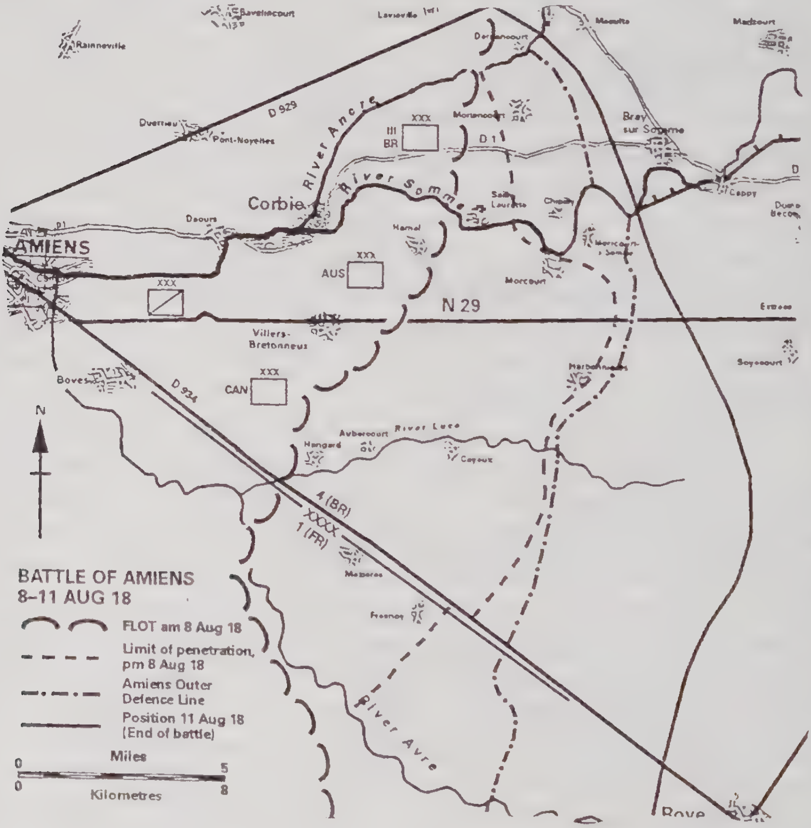
The 5th Army fell back, as did the 3rd, in conditions of considerable confusion, particularly at the upper command levels. After 26 March the front was settling as overstretch began to tell on the Germans; the Stosstruppen were worn down and the lowergrade follow-up formations were badly mauled by a defence which never gave up fighting. By 5 April the front was stabilised. Gough, commanding 5th Army, was, as the saying went, *dégommé*. The German main effort then switched to Flanders, where the GEORGETTE offensive was launched against First and Second Armies on 9 April. This attack was potentially far more dangerous than MICHAEL: the latter was going nowhere important provided everyone kept their heads, whereas GEORGETTE could have exposed the BEF's LOC [Lines of Communication] back to the Channel ports. Once again the initial thrust spent itself after five days, and by the 29th Ludendorff had closed down the Lys offensives.

Next came an initially very successful attack against the French armies on the Aisne (including some luckless British divisions sent to recuperate on the '*quiet*' sector of the Chemin des Dames) from 27 May. Unfortunately, the French general in command (Duchêne) had been unconvinced by advice on the intensity and effectiveness of 1918 artillery fire and insisted on packing the front line, with disastrous results. There followed a succession of German offensives aimed at expanding the penetration gained. Despite the magnitude of this last series of attacks, and the strain on French nerves as the Marne was crossed again (this was the time of the 'Paris Gun') they amounted to no more than a major line-straightening which then got out of hand; the original intention had been merely to establish a line on the highly defensible Aisne.

In front of Amiens on 24 April, a heavy British attack with tanks took Villers-Bretonneux, this being the first tank versus tank engagement. More significantly a divisional level counterattack recaptured the village that same night. As far as the BEF's front was concerned, the tide was on the turn. Although some formations were transferred to support the French in the Aisne-Marne fighting, the bulk of the BEF was in a position to rebuild either against renewed attacks (the Germans were planning a further offensive, HAGEN, in Flanders, and a lot of concreting was done in this period) or the day when it could move to the offensive. The period 21 March -30 April had seen over 200,000 casualties to the BEF; there was some human consolation that nearly half of these were prisoners, but from a practical point of view they were as lost as the dead and seriously wounded. Shortages in the infantry battalions would be a permanent feature of the coming operations; BEF casualties during the Hundred Days would average over 3000 a day.

The final German attack took place on the Marne on 15 July. By the 18th the French, with American support, had gone over to the offensive, and by the 20th the Germans had withdrawn north of the Marne. That battle was closed down on 5 August; the next fight would be at Amiens.

8 August 1918 has passed into history as '*The black day of the German Army*'. The fact that a well-prepared, well-supported and well-executed attack

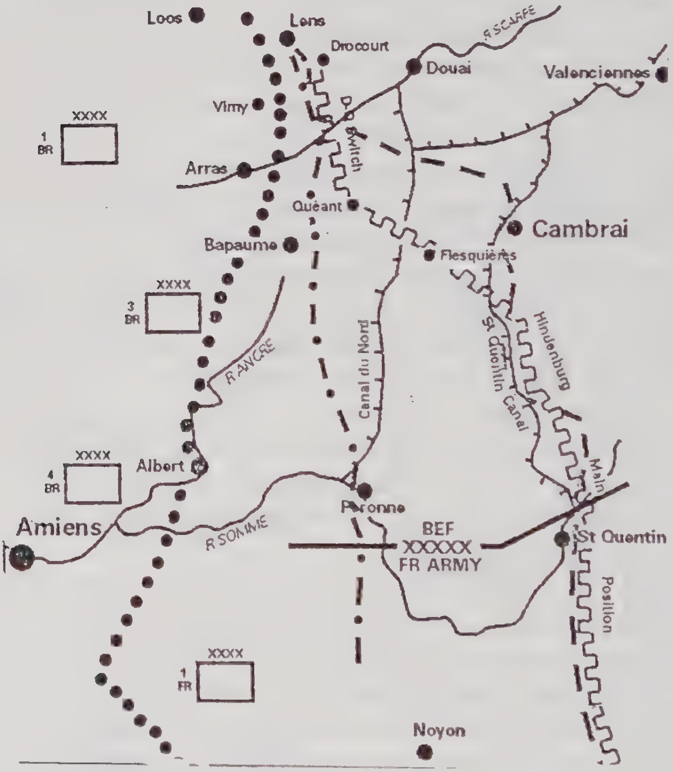

Rainneville
Bavelincourt
Lavieville
Dernancourt
Meaulte
Maricourt
D 929
Querrieu
Pont-Noyelles
River Ancre
XXX
III
BR
Morlancourt
D 1
Bray
sur Somme
D
Corbie
River Somme
Sailly
Laurette
Chipilly
Cappy
Daours
D1
AMIENS
Hamel
Merricourt-
s Somme
XXX
AUS
XXX
Morcourt
N 29
Estrées
Villers-
Bretonneux
Harbonnières
Soyecourt
XXX
CAN
Boves
D 934
N
Aubercourt
River Luce
Hangard
Caix
Cayeux
4 (BR)
XXXX
1 (FR)
Mezieres
BATTLE OF AMIENS
8–11 AUG 18
FLOT am 8 Aug 18
Limit of penetration,
pm 8 Aug 18
Amiens Outer
Defence Line
Position 11 Aug 18
(End of battle)
Fresnoy
River Avre
Miles
0
5
0
8
Kilometres
Roye

by three corps in the British sector and two in the French gained a conspicuous success should not have come as a particular surprise. The German attack had reached its culminating point in early April and they had not had the time nor the resources, with supply routes running across the old battlefields, to develop defences to their normal standards. The most important effect of the outcome was on the morale of both sides. Following the small but beautifully-formed attack by Monash's Australians at Hamel on 4 July, Amiens confirmed the effectiveness of the British artillery-infantry-plus-tanks tactical solution to the problem of the formal attack. The undeniable success of the Allies caused Ludendorff's already shaky mental state to collapse. Just as important was the moral effect of confirmation to the Allied armies that the tide had indubitably turned. The manner in which the victory was gained, based on meticulous preparation and a willingness to close the battle down early rather than spending blood and treasure on diminishing returns, showed that Haig and the Army commanders had learned some hard lessons from 1917 (the map clearly indicates that the bulk of the ground gained was taken in the first two days). Haig, responding to Rawlinson's advice, in fact went against Foch's insistence that the battle should continue; the fact that the French First Army was withdrawn from his command shortly afterward may be significant.

Ludendorff's morale had collapsed, and the German Army's fighting power was being eroded by the deteriorating situation in Germany and the losses in the successive attacks in the first half of the year, which had fallen disproportionately upon the elite assault formations. The policy of creaming-off the best quality personnel to man the Stosstrupp units automatically diminished the quality of what remained; the effect of this had been noted in the latter stages of the offensives against the British sectors, where the attack tactics of the '*trench*' divisions then committed had been less than competent. Nevertheless, the reduction in quality and morale was relative. What remained was still a German Army, with all that this term implies; it would be fighting in defence, where the technical competence of the troops would be less critical to performance. There would be no walkover. Although discipline was breaking down in many formations, enough of the machine gunners would hold steadfast, and counter-attacks would continue to come in even as the Armistice negotiations were taking place, into November.

The operations of the BEF from Amiens to the Armistice were typified by a remarkable flexibility, expressed in rapid shifts in main effort and short but extremely intense battles. The picture is one of far better management than in the previous year, with the demarcation between GHQ and the Army level of command being more clearly delineated, and less interference on the part of the former at the tactical level. This flexibility was aided and abetted by an availability of materiel which permitted successive massed fireplans in different sectors without the necessity of redeploying a ponderous artillery reserve, as had been the case in previous years and still was for the Germans. The difference in texture between 1917 and 1918 lies in the beginnings of an operational level command relationship between GHQ and the armies. Until the 1918 fighting, GHQ had dealt on the one hand at the military-strategic level and on the other, as a result of the one offensive at a time approach, had become too involved at the tactical level.

Rawlinson called a halt to the Amiens attack on 11 August with a view to its resumption on the 15th, but as previously stated, Haig was persuaded by the Fourth Army commander that the attack should continue. 3rd Army under Byng was already winding up for a major attack between the Arras and Somme battlefields which went in on the 21st, penetrating 3000 to 4000 yards on the first day. This attack stalled, but on the 22nd the Fourth Army attacked again east of the Somme. On 23 September Albert was recovered, while Third Army's offensive restarted, spurred on by Haig who was beginning to sense the scale of the possible payoffs from the acceptance of risk. By the end of August the advance was up to the north-south run of the Somme south of Peronne. Further


Loos
Lens
Drocourt
R SCARPE
Douai
Valenciennes
Vimy
XXXX
1 BR
Arras
D-Q Switch
Quéant
Cambrai
Bapaume
Flesquières
XXXX
3 BR
R ANCRE
Canal du Nord
St Quentin Canal
Hindenburg
Main
XXXX
4 BR
Albert
Amiens
R SOMME
Peronne
BEF
XXXXX
FR ARMY
St Quentin
Position
XXXX
1 FR
Noyon

ADVANCE TO AND BREACHING OF THE HINDENBURG LINE

Front Line
am 8 Aug 18 ● ● ● ● ●
31 Aug 18 — • —
3 Oct 18 — — -

north, Bapaume had been retaken, but east of Arras the advance was running into the Hindenburg Line.

Most of Peronne fell to the Australians on 1 September, and the remainder was taken on the following day. Further north, that day had seen a notable success as the Drocourt-Quéant Switch, the northern extension of the Hindenburg Line, was breached by two Canadian and one British divisions. On 3 September it was found that the Germans were withdrawing to the line of the Canal du Nord, forward of the main Hindenburg position. As an obstacle the canal was of varying difficulty, in parts filled with water but in others still a dry ditch.

By now, Foch was beginning to share Haig's view that the war could, and should, be won in 1918, but the politicians remained firmly wedded to the master plan of '*no decision before 1919*'. The military commanders were more keenly aware than were the civilians of the implications of another winter in the field; '*normal wastage*' for the BEF at quiet periods ran at the sobering figure of 1000 casualties a day, and there would still be a costly offensive campaign to fight afterwards. Dominic Graham and Shelford Bidwell contend that Haig was also driven by a legitimate desire to see the war brought to a close before the Americans could claim to have won a war in which the British and French had done all the hard work.

BEF operations in September were geared to closing up to the Hindenburg defences along the whole of their length. 1st Army was already up to the position in the north, and the manoeuvre of the 3rd and 4th was an immense left wheel, with 4th having furthest to go. By 26 September, 4th Army's right wing was overlooking the St. Quentin Canal, and both 3rd and 4th were ready for the assault on the main position. Meanwhile, the AEF had carried out its first wholly-owned offensive operation, clearing out the St. Mihiel Salient south of Verdun on 12 September.

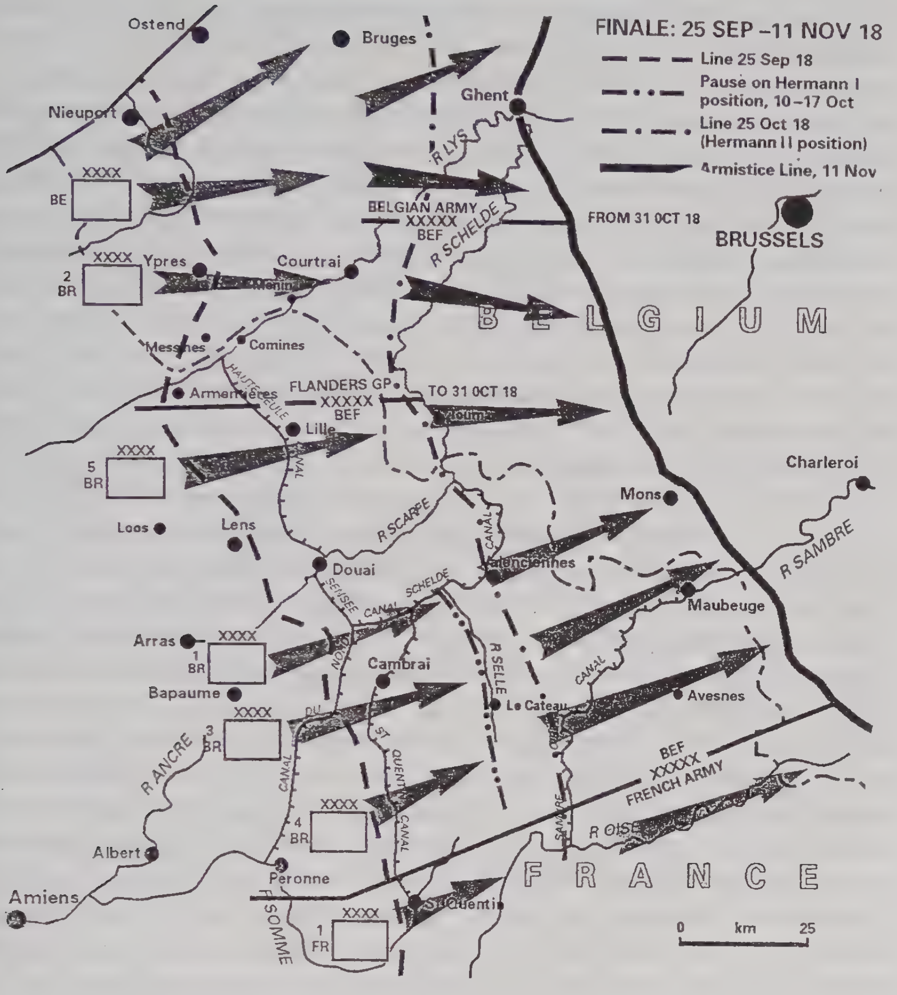
The attack on the main Hindenburg position was launched on 27 September initially by 1st and 3rd Armies, with the 4th Army also assaulting on the 29th. Incredibly, across the entire three-Army front, the Line was not only breached but mopped up by October, and the German forces began a general withdrawal to the Hermann position—a defence line on which little preparatory, work had been carried out. While the Hindenburg Line battles were in progress, on 28 September the Flanders Group, consisting of the Belgian Army, the British 2nd and some French forces attacked either side of Ypres and in a single day had recovered the northern half of the Salient. This penetration forced the Germans to evacuate the Messines-Wytschaete area.

Rawlinson's assessment of the Hindenburg Line victory was realistic as well as euphoric—that only the deterioration in the quality of the German Army had made this turnaround possible, and that the operation would have been impossible against the opposition of 1916. On the other side of the line, the necessity of seeking an Armistice had been confirmed at a major conference on 29 September; morale had not been improved by the news that Bulgaria had asked for an armistice on the 26th.

With the Hindenburg line overrun, the German High Command was fast running out of options. In *To Win A War*, John Terraine gives much space to the difficulties of the leaders on both sides in finding a formula which would enable hostilities to be brought to a close. Both the Allies and the Germans had been taken by surprise at the pace of events and the speed with which the German defences had been overrun. Nevertheless, the Germans still had plenty of depth available before the advance reached their frontiers, and if the nation, the High Command and the Army could hold together there was a good chance that German competence could keep the war going through the winter. The Allied leaders were divided; generally speaking, the military, Haig in particular, were in favour of offering terms sufficiently attractive to persuade the Germans to give up early and save the armies from further fighting in pursuit of doubtful objectives. The politicians, looking over their shoulders at the electorates, thought of reparations and revenge. Crucially, Wilson's position hardened as, with Congressional elections pending, the Republicans took up the cry of '*unconditional surrender*'. Feelings towards the Germans at this time were not improved by two ill-timed U-boat sinkings of passenger vessels with heavy loss of life.

Meanwhile, on the ground, the war went on. Of the three major armies, the BEF was in the best all-round shape; although tired and chronically low on manning, the formations were still willing to fight and competent at their job. The French, who admittedly had had less time than the British to recuperate after their share of the German offensives, were battle weary and not very interested. The Americans, though still fresh and keen, still had much to learn in terms of tactics. To the end of the War, they were never able to realize their full potential due to Pershing's insistence that the AEF should fight as an entity, and by their self-inflicted problems of organization—the American division was twice the size of anyone else's, and they insisted on inventing their staff structures from scratch. As a result, the diversion of French and British resources to the AEF (as a result of transfers RFA [Royal Field Artillery] gun teams were down to four horses by this stage) were to a considerable extent wasted. Of all the Armies, the Belgian was in best order; it had the enormous advantage of not having been knocked about to any extent since 1914.

The British advance from the Hindenburg Line is often referred to as a pursuit—but qualified by the 1918 interpretation of the term, in which four or five miles a day counted as good going. It must also be qualified by the observation that an examination of events indicates that the pursuit phases were of short duration—from the Hindenburg defences to the Hermann position, and in some sectors for the last week of the war. To the vast majority of British officers and


FINALE: 25 SEP –11 NOV 18
Line 25 Sep 18
Pause on Hermann I position, 10–17 Oct
Line 25 Oct 18 (Hermann II position)
Armistice Line, 11 Nov
FROM 31 OCT 18
BRUSSELS
BELGIUM
Ostend
Bruges
Ghent
Nieuport
R LYS
XXXX
BE
BELGIAN ARMY
XXXXX
BEF
R SCHELDE
XXXX
2 BR
Ypres
Courtrai
Menin
Messines
Comines
FLANDERS GP.
XXXXX
BEF
TO 31 OCT 18
Roubaix
Armentières
HAUTE DEULE
Lille
CANAL
XXXX
5 BR
Charleroi
Mons
Loos
Lens
R SCARPE
CANAL
Valenciennes
Douai
SENSEE
CANAL
SCHELDE
Maubeuge
R SAMBRE
Arras
XXXX
1 BR
NORD
Cambrai
R SELLE
CANAL
Bapaume
XXXX
3 BR
DU
Le Cateau
Avesnes
R ANCRE
ST QUENTIN
CANAL
CANAL
BEF
XXXXX
FRENCH ARMY
XXXX
4 BR
SAMBRE
R OISE
Albert
Peronne
FRANCE
Amiens
R SOMME
XXXX
1 FR
St Quentin
0 km 25

soldiers this was an unfamiliar style of war, though the 1914 BEF had been entirely geared to it. Even the platoon-based tactics of 1917 and the set-piece battles of 1918 had been fought with limited horizons and close objectives—it is fair to describe even the developed British tactics as variations on the theme of the assault, and little else. Leaders and led now had to learn on the job; fortunately, the opposition was now not in a position to teach the hard way.

The last formal and coordinated defensive line held by the Germans on the BEF front was the Hermann Position. This was based on the two waterlines of the River Selle (Hermann I) and the Sambre-Oise canal (Hermann II). Although consisting of field defences only, they turned out to be well wired in and in places lay in bocage country, where a minimal amount of work could convert each hedgerow into a formidable obstacle to infantry. Breaking into and through required full-scale attacks, and provisioning for these highlighted the supply and transport problem of the advance. Broken roads and railways, German denial action which was thorough to the point of being mean and small-minded, mines and booby-traps, and the general disintegration of the infrastructure, all contributed to a substantial friction factor and a diminution in the number of formations which could be maintained in the forward area, while matters were not helped by the fact that the autumn of 1918 was on a par with that of 1917 for wet weather. The BEF's recipe for success in the attack continued to include a very heavy weight of artillery fire, and the logistic load was in proportion. Getting tanks up, or regrouping them, was a particular problem—the options were to track, leading to a high breakdown attrition rate and a heavy engineering support load to keep them moving, or to wait for standard gauge rail transport to become available. It is hardly surprising that the last time a large tank force was assembled was for the assault on the Hindenburg Line. This is a practicality which does not seem to be given its full weight by the '*mechanical school*' of historians.

Advanced elements of the 3rd and 4th Armies made contact with the Hermann I positions on 10 October, and the next week was taken up with closing up to the line of the Selle in strength with 1st Army coming into line on the left, with repair of communications, and with inloading supplies for the attack. The fireplan began on the 13th with 1300 guns in action. On the 14th, the Flanders Group went on the offensive again, its operations also being hampered by logistic difficulties, 2nd Army having particular problems since its LOC lay across the old Ypres battlefields. 4th Army led off the attack on the Selle on 17 September, with 3rd Army following; by the 19th the Hermann I position had been taken and the Germans had withdrawn behind the Sambre-Oise Canal. Further north, 1st and 3rd Armies had crossed the Haute Deule canal and the Selle and were up to the Hermann II position by 24 October. Meanwhile, 2nd Army had taken Courtrai on 19 October, after equally serious fighting, while 5th Army on its right had occupied Lille on the 17th, and elements reached the River Schelde on the 20th. German resistance was still effective in this sector, and it was not until the 26th and 27th that they began to retire to the east bank of the river, and 1st, 5th and 2nd Armies could come into line along it. On 31 October 2nd Army reverted to Haig's command from the Flanders Group.

On 1 November 3rd Army and the Canadian Corps from 1st advanced south of Valenciennes and after some excitement that included a counter-attack involving captured British tanks, the Canadians entered Valenciennes on the 2nd. The German troops withdrew from the town and the line of the Schelde. Thereafter operations in this sector again took on the nature of a pursuit.

The final setpiece attack of the War, against the Hermann II position, was launched by 4th, 3rd and 1st Armies on 4 November. On the 4th Army front, the crossing of the Sambre Canal took some very hard fighting, but once across the canal the advance took off with a penetration of 15 miles by the 7th, despite appalling weather. Further north, the pattern repeated itself with tough initial resistance softening after 6 November. On that date the German High

Command (Groner having replaced Ludendorff) issued orders for a general withdrawal to the Antwerp-Meuse position; all that remained was for the Allied armies to follow up this withdrawal. On 5 November the German Armistice Commissioners crossed the lines, to be received by Foch at Compiegne. On 9 November the Kaiser abdicated, among real fears for his personal safety. At 0215 hours on 11 November the final session of the Commission began. In the BEF, the ceasefire message was transmitted by GHQ at 0650 hours and logged by the Army HQ by 0730. It is a reflection on how good communications were in all the Allied armies that, as far as is known, everybody knew in time to stop firing at 1100 hours.

As is usual on these occasions, the further from the firing, the greater the mafficking. Realities of war were replaced by realities of peace, and great was the horse-trading on the QM net as peacetime accounting caught up with wartime buccaneering. Regrettably, the transition to peace did not take enough account of the importance for the future of what had been done; too few, one feels, actually appreciated then, as now, the magnitude of the Army's achievement. Much of this was due to the change in the character of the Army which set in as the majority of the officers and soldiers of the wartime establishment moved back to civilian life. Their places were frequently taken by those individuals who have the knack of mysteriously surviving wars by being engaged on work of the greatest importance, but involving no risk to the person—Sassoon's '*red-faced majors at the Base*' being a case in point. So the Regular Army re-formed itself, and resumed proper training, and after unpleasant excursions to Ireland and Archangel, got down to the serious business of Imperial Policing. The Great War had been an aberration, and its purpose had been to end wars; nothing like it could ever happen again. Tragically for future prospects, the process of pulling the covers over the head also went a long way towards undoing the professionalization of the pre-war Army, which had gone just far enough to provide a fragile but just viable framework for the wartime expansion.

The British Army of 1914–18 was a unique construct. The BEF on its own was the biggest single business ever floated by the United Kingdom, and the development and management of this entity was such a mammoth task that actually wielding it as a fighting force became only one of a number of pressing commitments. Its leaders, from French and then Haig downwards, had to learn on the job; one of the key factors to take into consideration is that the French, German, and Russian military machines had in place the mechanisms for the raising, deployment and sustainment of large armies. These structures were lacking in the British Army, as they were in the American, and it is instructive to examine the time it took for the AEF to become an effective force. To the end of the War it was parasitic on the French and British armaments industries, and its military achievements were nowhere near commensurate with the numbers it deployed, nor its resource consumption.

The character of the BEF was in continuous flux from the beginning to the end of the War, as successive major sources of its manpower were used up. By 1918, Regulars and Reservists, Territorials, Kitchener volunteers had come and gone, and the character of the Army was defined by its conscript soldiers. In terms of quality of recruits, the policies adopted had been near disastrous; the K volunteers had included too many of the better-equipped physically and mentally, and the physical standards of the late-war recruit were a disturbing indicator of the poor median level of health of the British population. The retention of recruits in the UK during the winter of 1917-18 may have hit the BEF hard but it at least enabled something to be done in terms of developing their standards of nutrition and physique. The British showed up badly against the Australians, Canadians, and attached American divisions in physical terms; it has been fashionable to decry their comparative military performance, but there were very good, as well as some dud, British line divisions. Two of the greatest feats of arms of the whole war were achieved during the Hundred Days by '*ordinary*' British infantry divisions doing extraordinary things —the opposed crossings of the St. Quentin Canal by the 46th (Midland) Division on 29 September, and that of the Sambre Canal by 2nd Division on 4 November.

The provision of officers and NCOs for the BEF is a subject which justifies more attention than can be given here. Officers in infantry battalions in 1918 were young—in the higher ranks younger than their equivalents in a later war. Battalion commanders were likely to be in their mid-twenties; the future FM Earl Alexander of Tunis was a 26-year-old CO at this time. Famously, '*Boy*' Bradford VC was the youngest brigade commander at 25, and did not survive the War; a noticeable feature of the Great War was the high casualty rate among brigade commanders and their staffs. The divide between frontline soldier and the comfortable level of war indubitably cut in between the brigade and divisional levels of command. Many junior officers came in as the boy subalterns of popular myth, but a substantial proportion were commissioned from the NCO ranks—typically, intelligent K volunteers who had survived to prove themselves as combat leaders. This source of officers closely paralleled German Army practice, but it is interesting that it was not used to anything approaching such an extent by the British in the later war. The problem with creaming-off effective WOs and NCOs to meet the demand for officer leaders was that it weakened the structure at the vitally important lower level. As a result, the perceived need in the British Army for officers to do jobs which in the German were left to a competent NCO led to a shortage of competent NCOs - etc, etc.

The techniques used in 1918 revolve around the art of the possible. Ever since Fuller's '*Plan 1919*,' elegant solutions have been floated which, in theory at least, make better use of the more advanced technology of the time than was actually done. The equipments in question would have been available in large numbers in 1919, and would in all probability have made for an easier ride in that campaigning season. There might have been time in these circumstances also to develop and implement changes in the higher command structure, such as the implementation of an Army Group level of command within the BEF. However, it is difficult to fault Haig's drive to end the War in 1918 using available means and simple, well-understood techniques. What he had ready at hand as a battle-winner was a superb artillery arm, exceedingly well-equipped and furnished with as ample a supply of ammunition as could be transported to the gun end, with an advanced and extremely effective command and control system, that was supported by excellent survey and target acquisition. Artillery techniques had been developing rapidly throughout the War, and the ability of the gunners to produce enormous weights of fire in short bombardments, if necessary without adjustment, was a significant factor in increasing the tempo of operations. Nevertheless, the artillery weapon lacked the flexibility available in later wars, as a result of the lack of mobile radio—the missing link in Great War technology affecting all activities at the tactical level.

The infantry divisions were of variable quality, with the Empire troops being outstanding. Throughout 1918 infantry numbers were a perennial problem. with battalions being reduced to 400 or fewer as a matter of course. The shortfall had to be made up by firepower—artillery, mortars, Vickers, and Lewis (by 1918 the infantry battalion equipment table included 36 Lewis guns).

The tanks have to be considered as a large collection of prototypes for something better waiting round the comer; not essential to success, but guarantors of it if enough could be put together. Time and again it was found that their most valuable function was as wire crushers. By the end of the War, their effectiveness was being seriously diminished by German anti-tank weapons and tactics.

The day of cavalry as shock action troops in European war was over, but if operations had opened out their deep reconnaissance function could have proved vital. In the retreat, they had proved their worth over and over again in the counter-penetration role, but fighting dismounted. Finally, the RAF, despite its new found status as an independent Service, still saw support of the ground battle as its major function.

Although the BEF had three months between the lifting of German offensive pressure at the end of April and the Battle of Amiens, this was insufficient to reconstitute its forces, develop new concepts, and train the force in their use. The time available had to be spent on the first of these, and training raw replacements in what was known to work. The BEF would progress to victory using an ever bigger and better artillery hammer to break down the opposition in front of its dwindling numbers of infantry. Professor Tim Travers, in *How The War Was Won*, condemns this approach as '*Somme tactics*'. Undoubtedly the techniques had their genesis in the Somme fighting, but some degree of refinement had been applied since 1916. The unfortunate fact is that inelegant as they were, in their refined state they worked. As weapons, the Armies of the 1918 BEF were bludgeons rather than rapiers, but precision bludgeons, expertly wielded.

The shortcomings of the BEF over the length of the war were the shortcomings of an Army ill-prepared for the role which was thrust upon it by the political circumstances of 1914. Learning on the job in the middle of a war comes expensive, and when the wrong lessons are initially learnt and have to be discarded, doubly so.

This is not to suggest that the BEF was alone in its ignorance at the outset of the Great War; all the major combatants made mistakes and went on making them. The BEF's problems were, however, exacerbated by the extent to which its operational and tactical learning curves were coupled with monumental challenges in the organizational, equipment and administrative areas to an extent not shared by the other major belligerents other than the Americans.

The strength of the BEF of 1918 was that it was a force that knew what it could, and most importantly, what it could not do. It did not have the individual professionalism of the Contemptibles, or the boundless enthusiasm of the Kitchener Armies. Its conscript soldiers were very good at economy of effort, and keen on personal survival, but were willing enough to get the job done. They were outstandingly well equipped in terms of both quality and quantity, and despite attrition, they were still a very large force. The BEF's operations were directed by commanders who were fully aware of its capabilities and its shortcomings, and knew how to play to its strengths and cover its weaknesses. On the basis of comparison with contemporary norms, the 1918 BEF was the most formidable and effective land force the British have ever put into the field.

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Reading 4

THE TURNING POINT

Holger H. Herwig

Ludendorff, seeing 'the overpowering moral superiority in the attack', refused to be denied the pleasure of taking Paris. On 15 July he drove his dispirited and weary troops forward again in what was to be his last offensive. Hoping to draw British forces down from the north, Ludendorff changed theatres once more and sent 24 divisions of the Seventh and First armies against the eastern side of the Marne salient, striking against both the eastern and the western side of Reims. Wilhelm II came to the front to witness the so-called 'peace battle' in the Champagne. Although advanced units established a bridgehead across the Marne at Dormans, the campaign collapsed within 48 hours. Alsatian troops, as dispirited as the Germans, had betrayed the timing of the assault.[84]

Foch by now understood the precise nature of the German attack system with its creeping barrages and infiltration tactics, and countered with a sophisticated 'elastic defence'. The Allied generalissimo left only skeletal forces in his foremost trenches, marshalled his main units about a mile behind the front lines to absorb the brunt of the assault, and held fresh French and American divisions in the rear for quick counterattacks. In fact, 250,000 American troops now arrived in France every month, with the result that Pershing commanded

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25 divisions and 1 million support troops. Ludendorff hastily abandoned plans for the cherished offensive in Flanders (*Hagen*).

Instead, Wetzell, Ludendorff's operations officer, drafted memoranda detailing offensives on the Western Front as well as combined German-Austro-Hungarian operations to 'obliterate the Italian Army' in the autumn of 1918. Ludendorff allowed himself even greater flights of fantasy, informing General Friedrich Kress von Kressenstein that even after defeating France, his troops would have to pursue the British 'to their most vulnerable spot, to India'! For the time being, Ludendorff felt secure that his attacks since 21 March had so damaged the French Army as to preclude an attack.[85]

In his obsession with total victory, Ludendorff refused to acknowledge the appearance of what the writer Kurt Tucholsky called 'the Spanish sickness', a virulent influenza that in March 1918 had come from South Africa via Spain to France. In July about half a million soldiers lay sick in their trenches and another 80 000 in hospitals. While it usually lasted only 4 to 5 days, the Spanish influenza nevertheless had devastating effects on combatants: fever of 40 to 41 degrees Celsius, slowed heart rate of 60 beats per minute, tiredness, weakness, chill attacks, irritant coughs, and head as well as joint, back, and neck aches. Doctors initially responded only with bloodletting and cold compresses; later with antipyrin and salvarson.[86] When army commanders informed the OHL that the troops were exhausted and that a sudden bout of Spanish influenza had laid low almost 400,000 men, Ludendorff curtly replied: 'The troops need to get used to weak battle strengths; and I do not know influenza'.[87]

In the early hours of 18 July, German forward listening posts heard motor noises and traffic hums through the rain and thunder. Two French deserters came out of the forest of Villers-Cotterêts, and informed the Germans that a major attack would come between 5 and 6 a.m. Before the information could be passed back to headquarters, massive enemy formations emerged from the mist and fog around 5:35 a.m. The Germans could see swarms of tanks advancing at the rate of 5 miles per hour from behind the cover of a creeping barrage. Without prepared defensive positions or even shell craters to hide in and with their vision impaired by the high stands of grain in the fields, they were no match for the Allied onslaught. Foch's forces quickly ruptured Ludendorff's front, penetrated deep behind his lines, and then rolled his infantry up from the rear.[88] British planes mercilessly strafed the fleeing soldiers.

The so-called Second Battle of the Marne, spearheaded by 19 French divisions and 4 American, 2100 guns, 750 tanks, and more than 1000 airplanes, caved in Ludendorff's front. General Mangin's Tenth Army and General Jean Degoutte's Sixth Army hurled the Germans back behind the Vesle River. Ludendorff could only express his fervent hope that 'the Good Lord will not desert us'. Hindenburg bravely informed the Kaiser that the present predicament reminded him 'of the situations that Frederick the Great had to suffer through—and still won'.[89] French Premier Georges Clemenceau ebulliently proclaimed:

'My foreign policy and my home policy are the same. At home I wage war. Abroad, I wage war. . . . I shall go on waging war'.[90]

Ludendorff was forced to order a general retreat within 48 hours of Foch's breakthrough. On 19 July Lossberg pleaded with Ludendorff, whom he found to be 'terribly nervous' and 'very depressed', to withdraw immediately to the Siegfried Line. But the First Quartermaster-General blamed all past failures on his operations chief, Wetzell, and refused to accept this counsel, still believing that the Army was sound and intact.[91] Rage, panic, and paralysis gripped Ludendorff. Crown Prince Rupprecht apprised the OHL of his 'concern about the increasing deterioration of morale among the troops' in general and among the elderly soldiers who had been sent to France from Russia late in 1917 in particular. It was not at all unusual, Rupprecht informed the Supreme Command, for 20 per cent of reserves sent to the front to fail to report for duty.[92] Cases of desertion skyrocketed in July and August. Some openly refused to obey orders; others lost any sense of discipline; still others wildly fired their weapons out of moving trains. All too many readily surrendered to the Allies.[93]

The German Army had given its all for *Michael*. Skeletal divisions manned by badly clothed and undernourished soldiers and powered by emaciated horses had driven the best-equipped and best-fed armies of Britain and the Empire, France, and the United States back to the very gates of Paris. Outnumbered and outgunned in the air and on the ground, Ludendorff's soldiers had fought like lions. That they halted to sack rich Allied food and clothing depots speaks volumes for their physical state of being. Yet all they had achieved, in the words of the German official history were 'ordinary victories'. Nowhere had they possessed sufficient manpower to 'roll up' the enemy front. The lack of tanks and the inferior quality of their iron-rimmed trucks had denied them the ability to encircle, large enemy units.[94]

General von Hutier readily conceded that his soldiers were exhausted. No petrol for trucks. No ammunition for the artillery. No reserves. Poor defensive positions. 'The situation is terrible.' For the first time, reserves coming up to the front were met with shouts of 'strike breakers' by hardened veterans. Hutier was upset that 'the OHL counts only the number of divisions, not their strength and their [fighting] value'. Some battalions were down from their normal strength of 900 men to just 100. British air strafed the trenches with such intensity that the soldiers could neither sleep nor rest. *Michael* had driven them to the limits of their moral and physical capabilities.[95]

But Ludendorff refused to admit that his final roll of the dice had come up a loser. The Army now fought its second stubborn retreat in 4 years from the Marne step by bloody step—at the horrendous cost of 420 000 dead and wounded as well as 340,000 captured and 'missing'.[96] Groener, who would succeed Ludendorff in October, recalled that Hindenburg's second in command was a physically and morally broken man after 18 July. Ludendorff, Groener argued, had been absent from the front too long to understand its plight, had overestimated the Army's resilience, and yet had refused to concede defeat 'for political reasons'—read, war aims. Ludendorff simply hoped and prayed that the enemy was equally exhausted.[97] He refused to recall his occupation forces from the east for fear of surrendering conquered lands. Groener after the war reiterated his firm belief that the tide had turned on 18 July, whereafter 'Ludendorff's entourage complained about his indecision and inability to see the larger picture. He really duped himself and, just like Falkenhayn in 1916 at Verdun, was at his wit's end'.[98]

General von Lossberg shared Groener's thoughts. In his opinion, also, Ludendorff had 'overestimated the internal cohesion of our Army' and as a result had lost the initiative to the Allies on 18 July. Whereas Ludendorff would later claim that 8 August—the day Rawlinson's British Fourth Army led by 456 tanks and 800 airplanes crashed through the six skeletal divisions of Marwitz's Second Army near Amiens and inflicted 27,000 casualties on the enemy—constituted the 'black day' of the German Army, Lossberg (and Groener) moved that date back to 18 July.[99] With historical hindsight, one can well argue that the tide had turned already by 29 March. Bavaria's diplomatic delegation in Berlin informed King Ludwig III that Operation *Michael*, much like the U-boat campaign of the previous year, had raised hopes too high, only to dash them. Few inside Germany any longer believed Army communiqués; most gave greater credence to Allied casualty and POW reports.[100]

The truth is that Ludendorff never rose above the intellectual level of a regimental colonel commanding infantry. He believed that it sufficed merely to break the enemy line somewhere, at some time for the Allied armies to disintegrate and then surrender. He never understood that holes in the line, no matter how wide, could be filled with fresh reserves quicker than they could be exploited by exhausted attackers. He was bewildered by the storm of protest that he raised after the war with his comment: 'Tactics had to be raised above pure strategy'. And he defended his statement to the official historians of the war in 1923 as follows: 'I always had only the one great goal of victory before my eyes. The means to accomplish this were dictated by the prevailing situation. . . . For the offensive I always asked, where do I best break through, where is the enemy's weakest point'.[101] In a word, strategy became reduced to tactics.

Nor did Ludendorff admit that the Army was at the end of its physical and psychological capabilities after 18 July. Repeated Allied blows sent it reeling along the ropes like a punch-drunk boxer: Amiens, Meuse-Argonne, Flanders, Sambre, and Scheldt. The Allies stormed the Siegfried Line. Tens of thousands of German veterans deserted. Other tens of thousands simply went 'missing'. Artillery became lost in the massive retreat, and many regimental histories later attested to the demoralizing effect of so-called 'friendly fire'. 'Slackers' and 'shirkers' simply melted into the confusion of humanity in rear areas and in Belgium. Trains hauling the wounded back to base hospitals were often commandeered by rebellious troops.[102]

Like a boxer feeling his last shot at the title disappearing, Ludendorff refused to accept defeat. Instead, he blamed setbacks on his staff and on front-line commanders. He demanded that officers use their side arms to deal with cases of disobedience, that military courts hand down more draconian sentences for any and all infractions of military law, and that deserters be summarily executed. Last but not least, he blamed the looming defeat on the sheer numbers of Americans arriving daily at the front—without apparently ever recalling the haughty ease with which he as well as Wilhelm II and Hindenburg had dismissed American power when deliberating unrestricted submarine warfare in January 1917.

The Allied summer offensive of 1918 finally drove home the value of the tank to the OHL. While Ludendorff barely managed to scrape together 20 mostly captured enemy tanks at the start of 1918, Foch commanded a fleet of 600 to 700. By war's end, 45 German front-line tanks ranged against 3500 Allied. And while Britain had 5000 and France 4000 units on order for 1919, Germany hoped to field at most 1000.[103] After Foch's great tank-led offensive of 18 July, Colonel von Thaer sarcastically mused that 'even Ludendorff' should now acknowledge the tanks' value. The 'demigods' on the staff of the OHL for too long had reassured Ludendorff that 'our infantry laughs about the tanks'. Thaer bitterly noted that he had heard no such 'laughs' while serving at the front; rather, the men had '*pleaded* for an effective antitank weapon'.[104]

Reports from the front confirmed Thaer's concerns. On 11 August, 3 days after the British tank-led triumph near Amiens, the German Ninth Army summarized its experiences with the mechanical monsters. It bravely admonished troops not to overestimate tanks, but to show 'cold blood' and 'fire discipline' in combating them. Tanks were to be allowed to advance to almost point-blank range for the 13 mm antitank guns to be effective. Hutier's Eighteenth Army had experienced success by simply letting the tanks pass through its lines and directing artillery in rear echelons to dispatch them. But lately the Allies sent their tanks not as isolated units, but in waves. Individual antitank guns and machine guns were useless against massed vehicles. Hand-grenades were effective only if bundled together and placed in the caterpillar tracks—unless one was brave enough to climb on to the tank, open its hatch, and drop a grenade inside!

The best antidote consisted of a number of measures which, when combined, might prove successful. The troops were to dig deep and wide antitank ditches, to flood existing bogs and streams wherever possible, to dismantle or destroy solid bridges and replace them with fragile wooden structures too weak to support tanks, and to fell trees across their paths of advance. Artillery was to be massed in batteries throughout the entire defensive zone. And the guns had to be mobile: all too often they were deeply dug into earthen emplacements and hence ineffective against moving targets.[105] The Army estimated that it destroyed 102 French tanks in July, and 887 Allied between 8 August and 11 November.[106]

Germany's only production model, the A7V, proved to be so unwieldy and unreliable that it was mothballed in the summer of 1918; the 80 remaining chassis were converted to field trucks. The German Army in France had only

20 A7V tanks; its main armour consisted of about 170 captured Allied vehicles in various states of disrepair. The German official history conceded that its new 13 mm antitank gun had found little favour with the troops as it proved to be unreliable and tedious to operate.[107]

Manpower, of course, proved to be by far the most critical concern. Between March and July, the ranks of the German Army had been thinned from 5.1 to 4.2 million men. By July, one-third of the 196 divisions attached to Army Groups Crown Prince Rupprecht and German Crown Prince were down from 850 to 600 men at the battalion level. The 700- to 800-men reserves of the 'mobile' divisions had been exhausted. Countless divisions had but 2000 combatants.

The *OHL* undertook one last, frantic search for able bodies to send to the front. Relatively 'safe' rear-echelon formations such as motor, railroad, and communications units were stripped of 62,700 men and their counterparts at home of another 2,500 for service with the infantry. Occupation battalions in Russia were reduced from 800 men to 600. More than 132,000 soldiers were 'combed' out of rear-echelon support units, staffs, deputy staffs, and Belgian occupation forces. About 152,000 former German POWs were exchanged against Russians held by the Reich, but these could hardly be expected to serve in France in 1918. The 2.3 million men of the Home Army consisted mainly of indispensable staff, training officers, doctors, medical care workers, and superannuated Landsturm veterans unfit for front-line duty. Roughly 70,000 to 80,000 convalescents returned to duty each month. The only true reserve available was the cohort of 1900—400,000 youths of whom 300,000 could be expected fit for duty. "too bad about the [loss of this] young blood' was General von Hutier's terse comment.[108] No amount of juggling, however, could satisfy the Army's minimal demand for 200,000 replacements per month.

The *OHL* calculated that 1.3 of the 2.5 million men employed in war-related industries at home were fit for combat duty, but declined to conscript them for fear of thereby endangering armaments production. Nearly 4 million women as well as 130,000 Russian and 170,000 Belgian labourers already worked in German industry. None could be spared. In desperation, Hindenburg on 18 June demanded that the government enact his draconian proposals of the winter of 1916–17: forced direction of labour, reduction of wages and prices, restrictions on war profits, enforced female work, an end to job mobility, and the extension of war service to age 60. But Chancellor von Hertling had no desire to challenge either the Reichstag or trade unions on the matter, and on 1 July allowed it to lapse.[109]

The United States, in contrast, had no manpower problems. Unknown to the Germans, the Americans had laid plans for an 80-division Army of 4.3 million men to be ready in 1919.[110] But the presence of American units in the Allied lines as early as March had not escaped attention. Although Captain Willi Brüninghaus of the Navy Office brazenly informed German leaders as late as September that the U-war was on track and that the Americans arrived in

Europe 'naked so to speak', without equipment or supplies,[111] in reality the United States had sent half a million men to France at the very moment (July) that the German Army had been reduced by a million. The Republic had built 1000 bulk-cargo carriers of 3 million tons in 1917-18, and by 1918 was sending 296,000 tons of shipping down slips every month. Allied new construction in 1918 outpaced U-boat sinkings by nearly 3 million tons. At the height of the supply effort in the summer of 1918, one cargo or transport ship left its easterly seaboard for France every 5 hours. German naval leaders never explained what had happened to their 'guarantee' that not a single American soldier would ever land in France.

President Wilson, while in principle opposed to the 'amalgamation' of American troops with British and French forces, in July had allowed Pershing to let the Allies use his 'doughboys' (infantrymen) to plug gaping holes punched in their lines by Ludendorff's offensives. But Pershing thirsted for his 'own' battle. Foch and Haig yielded to his demands and agreed with the American commander that the first battle of the American Expeditionary Forces (AEF) needed to be a certain victory. The St Mihiel salient, a German bulge in the French lines in the direction of Bar-le-Duc that truncated the vital rail link between Verdun and Nancy, seemed a suitable target.

At 1 a.m. on 12 September more than 3000 artillery tubes for 4 hours fired 1.1 million shells at the Germans—the greatest single artillery bombardment in the war.[112] Thereafter, nearly 20 divisions of the American First Army, supported by 267 light tanks under the command of Lieutenant-Colonel George C. Patton, Jr., as well as about 1400 Allied aircraft attacked the eight war-weary and understaffed German divisions of Composite Army C in the form of two sharp pincers of a set of forceps on both sides of the salient. Victory was never in doubt—especially since Ludendorff on 11 September, the day before the attack, had ordered Army Group Gallwitz to evacuate the salient in case of attack.[113] The Americans in effect 'relieved the Germans' in the St Mihiel salient.[114] The moral fibre of the Germans can be gauged by the fact that they received the newly arrived Austro-Hungarian 1st and 35th divisions with cries of 'war prolongers'.

The AEF next joined British and French forces in the Meuse-Argonne region to deliver the Germans a 'knockout' blow. Brilliant staff work by Colonel George C. Marshall, Jr., moved about 600,000 doughboys roughly 60 miles from St Mihiel to the new sector. Basing their operational planning on the faulty assumption that the Argonne forest was impenetrable, the Allied and Associated Powers sought to hurl the Germans against this natural barrier, while at the same time cutting off all possible avenues of retreat. But the Argonne forest was not impenetrable, and the Germans hastily erected an 'elastic defence' consisting of deep trenches, concrete pill boxes, miles of barbed wire, and artillery to a depth of 6 miles in and around the Kriemhild Line. On 26 September the great American assault, supported by 3000 guns and 189 tanks, broke against this line near Côte Dame Marie.[115] It quickly bogged down as the Americans were mowed down by woven belts of machine-gun fire at 'death valley', as they called the Vesle River. It took weeks of hard work before Pershing's forces were able to break the Kriemhild Line, outflank the Bois de Boulogne, and throw the Germans behind the Meuse.

In October the German Fifth Army supplied Ludendorff with an assessment of American forces. It praised the individual vigour and prowess of the American soldier, but found liaison between staffs and fighting forces to be 'inadequate'. While infantry and machine guns were helpless against American tanks, most of the latter were rendered *hors de combat* not by artillery but rather by mechanical breakdowns and the mud of shell craters. Interrogation of American prisoners revealed that most were 'naive in military and political matters' and merely followed the desires of their officers to crush 'German militarism'. Whereas they originally had seen the war as a 'happy picnic', this 'hurrah patriotism' had vanished in the Meuse-Argonne campaign. Most Americans were weary of the war and simply wanted to go home.[116]

This analysis notwithstanding, the Americans pressed on. To the great chagrin of the French, Pershing's First Army, now commanded by General Hunter Liggett, decided to liberate Sedan—site of the ignominious French defeat in 1870. There is no question that the Americans calculated the prestige factor in their decision. General Hugh A. Drum, Pershing's Chief of Staff, bluntly stated: 'General Pershing desires that the honor of entering Sedan should fall to the American First Army'.[117] But a jumble of orders and counterorders confused the commanders in the field, with the result that Pershing's favourite First Division 'advanced through' the American 42nd (Rainbow) Division by night—and momentarily took its commander, General Douglas MacArthur, prisoner![118]

The burlesque of Sedan could not obscure the fact that the outcome of the war was no longer in doubt. In mid-August Wilhelm II conceded that the game was up: 'We are at the end of our capabilities. The war must be ended'.[119] On 6 September Ludendorff accused his staff and front-line commanders of having lost the war; the next day he replaced his operations officer, Wetzell, with Major Joachim von Stulpnagel. The military situation deteriorated rapidly. The German Army lost 228,100 men in August; of these, 110,000 were listed as 'missing', that is, they had deserted. The number of divisions had shrunk from roughly 200 in March to 125 by the end of September; only 47 were deemed fit for combat. The Allies maintained 211 full divisions in the field, and their numbers grew steadily with the daily arrival of thousands of Americans.

Morale among German troops reached new lows. Fresh units moving up to the front were greeted even by the venerable Prussian Guards with shouts of 'strike breakers' and 'war prolongers'.[120] Major Ludwig Beck, a staff officer with Army Group German Crown Prince and destined to rebuild the Army under Adolf Hitler in the 1930s, compared German forces on the Western Front to a fragile 'spider's web of combatants'.[121] Although the Army's last Medical Report was compiled on 31 July, researchers of the German official history later estimated the number of shirkers or slackers at between 750,000 and 1 million for the last 2 months of the war. And while there are relatively few documented cases of soldiers openly disobeying orders, apparently hundreds of thousands simply refused to take risks.

General Heinrich Scheüch, head of the War Office and soon to take over the Prussian War Ministry, tried to comfort Ludendorff with the news that 637,000 men born in 1900 would soon join the ranks. Some officers on Ludendorff's staff suggested that Germany might resort to a *levée en masse* or even to guerrilla warfare to stem the Allied advance. They found few takers. Major von Leeb with Army Group Crown Prince Rupprecht expressed the view of many when he stated: 'The campaign has been lost, the military mistakes [made] have now come home to roost'. Leeb only hoped that 'diplomacy can save what there is to save'.[122] He, as well as fellow staff officers, knew that the Army was both morally and physically destroyed.

On 1 October Colonel von Thaer joined the General Staff just in time to receive a detailed operational review from Ludendorff. The latter was no longer concerned with prosecuting the war to a victorious conclusion but rather with his role in history. Ludendorff began the meeting b expressing his fear that the Siegfried Line could be ruptured any day. 'The OHL and the German Army are finished; the war could no longer be won; rather, the final defeat was probably inescapably at hand.' Bulgaria had capitulated to the French General Franchet d'Esperey on 29 September; Austria-Hungary and Turkey were at the end of their endurance. Ludendorff reiterated that the Allies, with the help of nearly 3 million fresh American troops, could soon gain '*a great victory*, *a breakthrough in grand style*'. 'One could *no longer* rely on the troops.' The bottom line was that the Army had to be spared a catastrophic defeat at all costs. There was only one solution: the Kaiser and the Chancellor had to 'request an armistice *without any hesitation*'. Lest staff officers not appreciate the full meaning of his words, the First Quartermaster-General repeated that 'prosecution of the war was senseless', and that only 'a *quick* end' to the war could save the Army from destruction. Closing the briefing, Ludendorff cynically suggested that the Kaiser be asked to bring to power 'those circles which we mainly have to thank that things have come to this'. In other words, liberals and socialists were to be made ministers so that they would bear the burden for ending the war. '*They can now clean up the mess for which they are responsible*.[123] Most staff officers broke down amidst sobbing and tears.

Few of those present at the meeting realized that Ludendorff had just laid the foundations of the infamous 'stab-in-the-back' (*Dolchstoss*) legend that was to dog German politics in the postwar period. Within 24 hours, Ludendorff dispatched Major Erich von dem Bussche-Ippenburg to Berlin to inform incoming Chancellor Prince Max von Baden and party leaders that the war had been lost. The Bulgarian front had collapsed. The Western Front threatened to cave in any day. There was no antidote to Allied tanks. And the manpower situation was so critical that the Army could not survive the winter. 'Every [delay] of 24 hours could worsen the situation.[124] In short, Ludendorff demanded an immediate armistice on ae basis of the Fourteen Points—which the General admitted he did not now, and which he now requested from the Foreign Office. Civilian leaders, who had been denied precise information on the military situation for years by the OHL and the two dozen corps commanders at home, were now told to conclude peace at any price—and within a day.

Max von Baden became Chancellor on the evening of 3 October. Within 48 hours he dispatched a formal note to President Wilson requesting peace negotiations on the basis of the Fourteen Points. Wilson's reply of 8 October was diplomatic and polite, and merely requested clarification whether Imperial Germany in fact fully accepted the Fourteen Points as he basis for further discussions.[125] The Reich's ruling elite quickly embraced the President's measured words, much like a drowning person reaches for a lifeline. Ludendorff thought that Wilson's terms would allow him to keep Ukraine and the German-speaking parts of Alsace-Lorraine. The Foreign Home calculated that the Fourteen Points would permit Germany to regain its overseas colonies after the peace. Optimists in Berlin and Spa spied the chance to play Wilson off against hard-line Entente leaders such as Clemenceau and Lloyd George. A few even hoped to hoist the British on the President's petard concerning the 'self-determination' of peoples—read, the Irish question.

A second note of 14 October, in Wilson's own words, proved to be more 'frank and direct', and poured cold water on such rosy interpretations of the Fourteen Points. The President now demanded 'absolutely satisfactory safeguards and guarantees of the maintenance of the present military supremacy of the armies of the United States and of the Allies in he field', rebuked the Reich's 'illegal and inhumane' submarine warfare, and denounced the Germans' 'wanton destruction' of Flanders and France.[126]

In Berlin and Spa, panic set in with the arrival of the 'bombshell'. The chancellor on 16 and 17 October quickly dispatched his closest advisor, Kurt Hahn, to The Hague to assure the American legation there that the new government intended to reform Prussia's antiquated constitutional system. Additionally, by way of this personal diplomacy, Max von Baden hoped to appeal directly to President Wilson to end the war on moderate and humane terms. At Spa, Ludendorff still favoured an immediate armistice to save the Army, but Hindenburg on 18 October assured military commanders that the front, both in France and at home, could be 'regarded as being secure'.[127]

More realistic synopses, however, prevailed. Few army leaders saw any hopes in renewing the war, and few diplomats expected more lenient treatment from Paris or London. On 20-1 October the German government formally appealed to Wilson for an armistice. It agreed to evacuate all occupied territories, but rejected the President's charges of 'illegal and inhumane actions' in occupied territories. It further pointed out that Germany was already revising its constitution along more democratic lines, thereby hoping to defuse American charges of 'Prussian militarism'. For the first time in its history, Germany accepted proposals by a foreign power as the basis for peace.

President Wilson's third note of 23 October removed any final illusions that the Germans may have had about a peace based on the Fourteen Points. Wilson demanded 'unrestricted power' to 'make a renewal of hostilities on the part of Germany impossible'. Moreover, he refused to negotiate with the 'King of Prussia' and his military minions, whose words could not be trusted, and instead stated that he would deal only with the 'veritable representatives of the German people who have been assured of a genuine constitutional standing as the real rulers of Germany'. The only terms to be offered to 'the monarchical autocrats of Germany' were 'surrender' . [128]

Neither statesmen nor soldiers in Germany ever understood what Wilson had meant in January 1917 by his formula 'peace without victory'. The President's fundamental policy, based on his conception of a just and lasting peace, remained consistent: the United States would enter the conflict one way or another to secure 'an equitable territorial settlement based on self-determination and a new world order based on collective security'.[129] The defeat of 'Prussian militarism' and 'autocracy' was part of that policy. The problem was that Wilson's personal style of diplomacy often was at odds with his idealistic pronouncements. His biographer, Arthur S. Link, admitted that the President 'exercised almost absolute personal control' over foreign affairs, that he often bypassed the State Department via private agents and advisers, that he at times conducted negotiations behind the backs of his Secretaries of State, and that overall he 'acted like a divine-right monarch in the conduct of foreign relations'. Secure in the knowledge that the American people had 'temporarily vested their sovereignty in foreign affairs in him'[130] Wilson saw himself as an instrument of divine purpose. He believed that his intellect was superior to that of both his associates and the German negotiators.

The President's third note stunned the Germans. Wilhelm II had already dismissed Wilson's second note as 'a piece of unmitigated frivolous insolence',[131] and Ludendorff on 23 October reacted to the third note by stating that he already found Prince Max's peace terms to have been 'beyond the bounds of what was militarily acceptable'. Ludendorff ranted to his staff about Wilson's and the Allies' 'boundless will of conquest and annihilation'.[132] Hindenburg concurred. At 10 p.m. on 24 October, he promulgated what amounted to a declaration of war on Prince Max's peace initiative. The Army's Order of the Day to all soldiers, read aloud to the General Staff to shouts of 'Long Live His Majesty, our King, Kaiser, and Warlord!', minced no words: 'Wilson's answer demands military capitulation. Thus for us soldiers it is unacceptable. . . . Wilson's answer can only amount to a challenge to continue to resist to the utmost of our capabilities'.[133] Obviously, Ludendorff and Hindenburg were quite willing to prolong the war in order to secure their vast annexations in the east and to maintain the Prusso-German ruling elite in power.

They found few takers and thus Prince Max was spared a confrontation with the *OHL*. On 26 October General Erich Ludendorff left his defeated Army in the field and fled in disguise to Sweden to pen his memoirs. Major von Leeb tartly commented: 'Therewith the mil[itary] dictatorship that until now has truly existed is at an end'.[134]

Notes

84. Army Group Archduke Albrecht on 8 August 1918 issued orders to keep Alsatians in line by threatening them with capital punishment even after the war, thus denying them a safe haven in Alsace; by seizing home and land; and by publishing their names. BA-MA, PH 5 1/75 AOK. Heeresgruppe Herzog Albrecht.

85. *Der Weltkrieg* 1914 bis 1918 14, pp. 430-1, 444, 514.

86. See Manfred Vasold, *Pest, Not und schwere Plagen. Seuchen und Epidemien vom Mittelalter bis heute* (Munich, C. H. Beck, 1991), passim.

87. Cited in *Der Weltkrieg 1914 bis 1918* 14, p. 445.

88. *Der Weltkrieg 1914 bis 1918* 14, pp. 479, 503.

89. Cited in *Der Weltkrieg 1914 bis 1918* 14, p. 490.

90. Cited in Marc Ferro, *The Great War, 1914-1918* (London, Routledge & Kegan Paul, 1973), p. 199.

91. Lossberg, *Meine Tatigkeit im Weltkriege*, pp. 344-7. Ludendorff apparently felt that his departure from the scene would lift enemy spirits and depress those of the German front and home. He threatened to resign if Lossberg pressed his demand for a strategic retreat. BA-MA, N 46, Nachlass Groener, vol. 156.

92. Crown Prince Rupprecht, *Mein Kriegstagebuch* 2, p. 402. Entry dated 25 June 1918.

93. *Der Weltkrieg 1914 bis 1918* 14, p. 523.

94. *Der Weltkrieg 1914 bis 1918* 14, p. 681.

95. BA-MA, W- 10/50640 Tagebucher v. Hutier. Entries for 9 and 17 July, 10 August, 25 and 30 September 1918.

96. *Der Weltkrieg 1914 bis 1918* 14, Appendix 42.

97. BA-MA, Nachlass Groener, N 46, vol. 63. 'Ludendorff'. See also Lossberg, *Mein. Tatigkeit im Weltkriege*, p. 346.

98. Wilhelm Groener, *Lebenserinnerungen. Jugend, Generalstab, Weltkrieg*, ed. Friedrich Hiller von Gaertringen (Gottingen, Vandenhoeck & Ruprecht, 1957), p. 347. Lossberg Meine *Tatigkeit im Weltkriege*, p. 351, states: 'Not just 8 August 1918, but already 18. 7 1918 was the critical turning point in the conduct of the war',

99. Lossberg, *Meine Tatigkeit im Weltkriege*, pp. 350, 354. Ludendorff made his claim about 8 August in Urkunden der Obersten Heeresleitung, p. 547.

100. BHStA, MA 3085 Militar Bevollmachtigter Berlin. Schoen's report of 24 July 1918.

101. *Der Weltkrieg 1914 bis 1918* 14, p. 679.

102. See the splendid piece on this 'camouflaged military strike' by Wilhelm Deist in Wolfram Wette, ed., *Der Krieg des kleinen Mannes. Eine Militargeschichte von unter?*, (Munich and Zurich, Piper, 1992), pp. 146-67.

103. Riebicke, *Was brauchte der Weltkrieg?*, pp. 51-2.

104. Thaer, *Generalstabsdienst an der Front*, p. 220.

105. BA-MA, PH 8 1/34. AOK 9. Tank Abwehr.

106. BA-MA, PH 20/19 Versorgungstruppen. Tanks.

107. *Der Weltkrieg 1914 bis 1918* 14, p. 525.

108. BA-MA, W-10/50640 Tagebucher v. Hutier, entry for 24 October 1918.

109. *Der Weltkrieg 1914 bis 1918* 14, pp. 517-20.

110. Trask, *The AEF and Coalition Warmaking*, p. 78.

111. BHStA, MA 3085 Militar Bevollmachtigter Berlin. Lerchenfeld's report of 28 September 1918.

112. Riebicke, *Was brauchte der Weltkrieg?*, p. 36. American forces according to United States Army in the First World War 1917-1919. 8: *Military Operations of the American Expeditionary Forces* (Washington, DC, U.S. Government Printing Office, 1948), pp. 131-5, 167, 235.

113. BA-MA, P11 5 1/52 AOK Gallwitz. Ludendorffs order, dated 11 September 1918. See also *Der Weltkrieg 1914 bis 1918* 14, pp. 599-602.

114. B. H. Liddell Hart, T*he Real War 1914-1918* (Boston and Toronto, Little, Brown, 1930), p. 456.

115. See Trask, *The AEF and Coalition Warmaking*, pp. 122-3, 127-9; and Rod Paschall, *The Defeat of Imperial Germany 1917-1918* (Chapel Hill, Algonquin Books, 1989), pp. 163 ff.

116. BA-MA, PH 51/52 Army Group Gallwitz. Report of 28 October 1918.

117. Drum to Pershing, 5 November 1918. *United States Army in the First World War, 9: Meuse-Argonne Operations of the American Expeditionary Forces* (Washington, DC, U.S. Government Printing Office, 1948), p. 385.

118. See the report of 7 November 1918 by General Charles P. Summerall, commander of the V Army Corps. *United States Army in the First World War 9.* Also Edward M. Coffman, *The War to End all Wars: The American Military Experience in World War I* (Madison, The University of Wisconsin Press, 1986), p. 351.

119. Cited in *Der Weltkrieg 1914 bis 1918* 14, p. 568. Dated 10 August 1918.

120. *Der Weltkrieg 1914 bis 1918* 14, p. 622; Lossberg, Meine Tatigkeit im Weltkriege, p. 356; A[ugust] von Cramon, *Unser Osterreichtisch-Ungarischer Bundesgenosse im Weltkriege. Erinnerungen aus meiner Tatigkeit als bevollmachtigter deutscher General beim k. u. k. Armeeoberkommando* (Berlin, E. S. Mittler & Sohn, 1922), p. 174.

121. Klaus-Jurgen Muller, *General Ludwig Beck. Studien und Dokumente zur politisch-militarischen Vorstellungswelt und Tatigkeit des Generalstabschefs des deutschen Heeres* 1933-1938 (Boppard, H. Boldt, 1980), p. 326.

122. Leeb, *Tagebuchaufzeichnungen*, p. 138. Entry dated 30 September 1918.

123. Thaer, Generalstabsdienst an der Front, pp. 234-5. Leeb, Tagebuchaufzeichnungen, p. 140, quickly accepted that survival of the Army was the most important task at Supreme Command. 'The main thing now is not to allow a catastrophe to destroy the , Army.' Entry for 3 October 1918.

124. Cited in Prinz Max von Baden, *Erinnerungen und Dokumente*, ed. Golo Mann (Stuttgart, Ernst Klett, 1968), pp. 322-3.

125. Arthur S. Link, ed., *The Papers of Woodrow Wilson* (69 vols, Princeton, Princeton University Press, 1965) 51, pp. 268-9.

126. Link, ed., *The Papers of Woodrow Wilson* 51, pp. 333~.

127. BA-MA, PH 5 1/52 Army Group Gallwitz.

128. Link, ed., *The Papers of Woodrow Wilson* 40, pp. 402, 417-19.

129. Trask, *The AEF and Coalition Warmaking*, p. 167.

130. Arthur S. Link, *The Higher Realism of Woodrow Wilson and Other Essays* (Nashville, Tenn., Vanderbilt University Press, 1971), p. 83.

131. Cited in Ritter, *Staatskunst und Kriegshandwerk* 4, p. 441.

132. BA-MA, PH 5 1/52 Army Group Gallwitz. Ludendorff s opinions of 23 October 1918.

133. Cited in Ludendorff, *Urkunden der Obersten Heereseitung*, pp. 577-8.

134. Leeb, *Tagesbuchaufzeichnungen*, p. 148, dated 27 October 1918.

Reading 5

THE INTERWAR PERIOD: GERMANY

Captain Jonathan M. House

The conventional image of military affairs and doctrine between the two world wars depicts most armies as rigidly committed to a repetition of the positional warfare of 1914–18. According to this view, only Hitler's Germany listened to the advocates of mechanized warfare, with the result that between 1939 and 1941 the German blitzkrieg achieved almost bloodless victories over the outdated Polish, French, and British armies.

The reality was much more varied and complex. No major army entered World War II with the same doctrine and weapons that it had used twenty years before. During the interwar period, the majority of professional soldiers recognized that some change was necessary if they were to perform better the battlefield functions of penetration and exploitation that had proven so difficult during World War I. Yet armies differed markedly in their solutions to these problems. Instead of a simple choice between trench warfare and blitzkrieg, each army was faced with a variety of possible changes, a series of degrees of modernization between the two extremes. In many cases, the choice was determined by social, economic, and political factors more than by the tactical concepts of senior officers. Even in Germany, the advocates of mechanized

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warfare did not have a free hand. In a real sense, the German forces and doctrine of 1939 were not so much the perfect solution as they were simply a solution that was closer to the problems of the moment than were the organizations and doctrine of Germany's early opponents.

Because of this tactical variety between the world wars, the doctrine and organization of each of the major powers must be considered up to the point at which that nation entered World War II. Before reviewing these armies, however, it is necessary to examine some common factors that hampered military change in most nations.

The first of these factors was a general revulsion against warfare and all things military. After decades of peacetime preparation and years of incredible bloodshed, few people in Europe or America were interested in further military expenditures or experiments with new weapons and tactics. Particularly in France, firepower seemed so great that few soldiers foresaw any type of offensive success against prepared enemy positions without the combination of a mass army with tanks, artillery, and attrition tactics, the means that had succeeded in 1918. Even after most armies concluded that trench warfare was a special kind of combat that would not necessarily recur, the general public and political leadership were unwilling to risk another war. In 1928, fifteen nations signed the Kellogg-Briand Pact, renouncing the use of war except in national self-defense. During the 1920s and early 1930s, a series of international conferences attempted to limit military and naval armaments. Although these conferences ultimately failed, it was difficult for professional soldiers to justify the purchase of new weapons such as tanks and aircraft in a social and political environment that might outlaw such weapons at any time.

During the first fifteen years of peace, extremely tight defense budgets reflected the public distaste for warfare. The victorious armies were saddled with huge stockpiles of 1918-model equipment and ammunition and had to use up these stockpiles at peacetime rates before major new expenditures could be justified. Thus, during the early 1930s the U.S. Army spent more money researching means to preserve ammunition than to develop new weapons.[1] Just as the stockpiles were consumed or worn out, the Great Depression caused even tighter defense budgets, which hampered development and procurement of tanks, aircraft, and other new weapons. The Germans, by contrast, had been deprived of their weapons by the Versailles Peace Treaty of 1919 and could therefore start fresh. To some extent, the German tactical successes of 1939–42 were due not to any superiority in equipment quality or quantity, but rather to the fact that the German tanks and other vehicles were produced early enough to allow extensive experimentation and training before the war. In contrast, the British and French had few modern weapons with which to train until the very eve of World War II, when they mass-produced them on a crash basis. Nations with a smaller industrial base, such as Japan and Italy, could not fully compete in the arms race. The Japanese selectively built a few types of warships and aircraft of high quality. In land warfare, they relied upon training and morale to make up for weapons that they could not afford to mass-produce. Italy lacked not only production facilities, but equipment design capability and even public understanding of automobiles and other machinery. As a result, the Italians failed to produce any modern, well-designed weapons.[2]

A third factor was technology, which affected military change in two ways. On the one hand, rapid changes in technology made governments even more reluctant to invest in existing designs that would soon be outmoded. In 1938, for example, the Inspector-General of the French Air Force had to advise the French and British governments to avoid a showdown at Munich because he believed that the majority of French combat aircraft were suddenly obsolescent; new developments such as flush-riveted metal construction gave the German Luftwaffe the appearance of technical superiority.[3] On the other hand, it was often difficult to determine exactly how this new technology affected the tactics of 1918. Equipment designed to fulfill these tactics might be unsuitable for different functions and concepts, while new designs appeared without appropriate tactical concepts to accompany them.

There was also considerable confusion in terminology. Both advocates and opponents of mechanization often used the term “tank” loosely to mean not only an armored, tracked, turreted, gun-carrying fighting vehicle, but also any form of armored vehicle or mechanized unit. Such usage made it difficult for contemporaries or historians to determine whether a particular speaker was discussing pure tank forces, mechanized combined arms forces, or mechanization of infantry forces. Similar confusion existed about the term “mechanization.” Strictly speaking, any use of the gasoline engine for warfare could be termed mechanization. However, this term is usually employed to describe the use of armored tracked combat vehicles. By contrast, “motorization” describes the use of motor vehicles that are not intended to go into combat, but which may improve logistics and mobility off the battlefield. No nation in the world could afford to mechanize fully in this sense, but all armies made some motions in the direction of motorization. Indeed, there was almost no choice about the matter. Prior to World War I, all nations relied on a pool of civilian horses as transportation in case of war. With the rise of motor vehicles during the 1920s, this supply of civilian animals declined to the point where armies had to base their transportation planning on motor vehicles.[4] Thus, motorization was often seen as an easier, cheaper, less revolutionary change than mechanization.

Fifth, advocates of change did not always speak persuasively or with one voice even when their terms were understood. Even those reformers with a clear vision of mechanized, combined arms war were often so extreme in their statements that they alienated the men they needed to convert, the commanders and politicians who set military policy. In the French and Soviet cases, political issues retarded the development of new mechanized formations. Moreover, proponents of strategic air power such as William Mitchell and Guilio Douhet made exaggerated claims that retarded the development of the tactical combined arms team. Intent on achieving independence from army control, the air power advocates vigorously opposed tactical air support and air-ground cooperation; they considered the targets involved to be too minor to justify risking aircraft. These air enthusiasts had a limited success as publicists, influencing politicians with an apparently cheap, efficient solution to defense needs. As a result, funds were diverted from valuable training or ground weapons development to build air forces that were not in proportion to their respective armies. This leads to the sixth and final common factor, the opposition of the more traditional combat arms. Many commentators have blamed such opposition for thwarting or retarding the development of mechanized warfare. There is some truth to this accusation, as will be seen below. Yet the tank and the aircraft were not the only weapons systems that developed between the world wars. The older branches had genuine needs that competed with new weapons for funding and for roles in the combined arms team. The infantry had legitimate requirements for increased organic firepower, for anti-tank and anti-aircraft defenses, as well as for some form of armored support to assist it in the deliberate attack. The artillery needed the same mobility as the armored forces in order to support those forces in the breakthrough. Fast moving mechanized formations required more flexible communications and fire support. Combat engineers, which had become preoccupied with maintaining lines of communication during the positional warfare of 1914–18, were more important than ever when mechanized units increased the problems of mobility and countermobility on the battlefield. As a result . . . the development of mechanized formations and tactics . . . must be viewed within the context of a more traditional mass army. Any nation that created a mechanized elite ran the risk of dividing its army, with catastrophic problems of coordination and morale.

Germany: "Strike Concentrated, Not Dispersed."[5]

France, Britain, and the United States, the victors of 1918, had a natural tendency to employ at least some of the materiel and doctrine of 1918 during the immediate postwar years. A defeated Germany, by contrast, had every reason to embrace new tactics and weapons.

Even if it wished to, Germany could not reproduce the mass armies and static defenses of 1914–18. The Treaty of Versailles limited the German Army to 100,000 long-tour professional soldiers, without reserves except for the paramilitary police forces. The same treaty forbade Germany to possess tanks, poison gas, combat aircraft, and heavy artillery. Paradoxically, for the Germans this prohibition may have been a blessing in disguise. The German defense budget and tactical thought were less restricted to, or dependent on, the technology of 1918 than were other budgets and armies. Instead, planners could study concepts and then develop the equipment to make those concepts reality. Doctrine led technological development, in contrast to the situation in other armies. In those instances where field trials had to be conducted, the Germans used mock-ups, or tested equipment and concepts in secret within the Soviet Union. This is not to say that German planners started from scratch. No army can completely escape its past, but Germany certainly had an advantage over the victorious Allies.

Since the 1860s, the German tradition of tactics and operations had favored outflanking and encircling the enemy or, if that failed, breaking through to disrupt his organization. This was in contrast to the frontal battles of attrition that most of Germany's enemies had fought in World War I. This German tradition meant two things. First, unlike the French and British, who had learned to attack on a broad front in order to protect their flanks, the Germans believed in concentrating all their resources on a relatively narrow front for breakthrough.[6] Second, this concentration of forces required the careful integration of all weapons and arms at battalion level or below to overcome the enemy's defenses. The infiltration tactics of 1917–18 reflected this viewpoint and were retained after the armistice. Despite the restrictions of the Versailles Treaty, the 1921 German Regulation on *Command and Combat of the Combined Arms* included not only the infantry assault battalion and the carefully planned artillery and preparations of 1918, but also close air support, gas warfare, and tanks in an infantry-support role.[7] Again, the Germans were free to develop doctrine on the basis of their experience but without being restricted to specific technology. Despite later manuals this sophisticated regulation remained the basis of German doctrine between the wars.

Another part of the German military tradition was decentralized execution. German commanders moved forward to observe and make tactical decisions for themselves. This enabled them to communicate their decisions to subordinates much more rapidly than was possible from a command post in the rear. This decentralization was facilitated by a mutual understanding among German leaders, an understanding based on common doctrine such as the *Command and Combat of the Combined Arms.* Aware of both a commander's intention and the common doctrine, subordinate leaders could execute that intention in accordance with that doctrine and, thereby, reduce the need for detailed instructions from higher echelons. This decentralization and rapidity of decision making were ideally suited to any form of fluid combat, including mechanized operations.

In retrospect, it might seem inevitable that, once combined with the German experience of the psychological effects of tanks during World War I, the German infiltration tactics, the belief in massing on a narrow front, and decentralized execution would lead to blitzkrieg. In fact, however, the German Army did not wholeheartedly accept the concept of mechanized blitzkrieg until the defeat of France in 1940. Prior to that time, the majority of senior German commanders apparently regarded mechanization as a useful but very specialized tool that would not replace ordinary infantry divisions. In thinking this, they shared much of the traditional viewpoint that characterized their counterparts in Britain, France, and elsewhere.

Among the German proponents of mechanization, General Heinz Guderian was probably the most influential. Like Percy Hobart in Great Britain, Guderian had considerable experience with the early military use of radio communications. This had two effects upon his later career. First, Guderian's 1914 service with radiotelegraphs in support of cavalry units led him to insist on a radio in every armored vehicle, a major advantage in command and control. By contrast, the French and others often had radios only for the command tanks and depended on hand signals or flags to maneuver small units. More generally, Guderian's early service taught him the difficulties of integrating new doctrine and equipment and then overcoming institutional resistance to that doctrine and equipment.[8] As a staff officer concerned with motorized transportation, Guderian gained further experience from his first studies of mobile warfare. The small size of the German Army in the 1920s forced it to increase its mobility in order to shift limited forces rapidly. Guderian was one of a group of officers who studied the use of motor vehicles to achieve this mobility. To a certain extent, the German theorists had to rely on British experience and regulations to learn about equipment that Germany did not possess in large numbers. Yet, the German concept of mechanized warfare developed almost independently of such trends in Britain. By 1929, when many British students of armor were tending towards a pure armor formation, Guderian had become convinced that it was useless to develop just tanks, or even to mechanize parts of the traditional arms. What was needed was an entirely new mechanized formation of all arms that would maximize the effects of the tank. Only such a formation could sustain mobile warfare, whether offensive or defensive.[9]

The general belief among military theoreticians that antitank defenses were becoming stronger did not deter Guderian. Unlike most advocates of armor, he considered antitank weapons to be an essential part of the mechanized combined arms team, rather than the defender of the traditional arms against the new weapons. Most early tanks were too small and unstable to carry accurate, high-velocity antitank guns. By contrast, the towed antitank gun was specially designed for maximum effectiveness against armor, and its small silhouette made it difficult to detect and engage. The German armored units trained to avoid fighting other tanks or antitank guns, and instead to exploit in areas of little or no resistance. In the event of tank-versus-tank combat, the German tanks might withdraw temporarily, luring the enemy into a hidden screen of antitank weapons that had deployed behind the German spearhead. To do this, tanks needed reconnaissance units to lead the way and screen the flanks of the advance, with combat engineers to sustain the mobility of the mechanized force. Motorized or mechanized infantry and artillery were necessary to reduce bypassed centers of resistance, to support tanks in the attack, and to hold areas seized by such attacks. The entire force required support units that could keep up with a rapid advance.

In 1931, Guderian became commander of the 3rd Motor Transport Battalion. Using dummy equipment because of the limitations of the Versailles Treaty, this battalion was actually an experimental "mechanized" force consisting of one company each of motorcycles, armored cars, tanks, and antitank guns. A similar small scale demonstration, using some of the first light tanks produced in Germany, impressed Hitler in 1934.[10] That same year, experimental maneuvers for a full panzer division took place, and in 1935 Hitler formed the first three such divisions on a permanent basis. As in the other armies, Germany's first effort at armored organization included a tremendous number of tanks (561 per division).[11] Otherwise, this organization showed considerable balance in numbers and types of weapons. Moreover, regardless of the paper organization, the brigade and regimental headquarters were trained to control cross-attached units and weapons systems. Such a system required considerable training and put great stress on the maintenance and logistical support of the cross-attached elements, but it enabled the panzer division to combine different weapons systems as needed.

Guderian did not, however, succeed without opposition and difficulties. The other branches of the German Army resisted the creation of this new arm and demanded a share of mechanization and motorization for themselves. During the later 1930s, the Chief of the German General Staff directed the motorization of all antitank units and one engineer company in all infantry divisions, plus complete motorization of four selected infantry divisions, at a time when the panzer divisions were still short of transportation. In 1937–38, two separate tank brigades were formed for infantry support, isolated from the other arms. At the same time, four "Light Divisions," based on cavalry units in most cases, absorbed more motorized and mechanized equipment. The actual composition of these units varied, but the most common pattern was an armored reconnaissance regiment, two motorized infantry regiments, one light tank battalion, and two towed howitzer battalions. A frustrated Guderian found himself shunted aside as "Chief of Mobile Troops," with little or no control over the motorized infantry and light divisions.[12]

Nor were the German tanks up to the standards of Guderian's concept. Despite Hitler's support for panzer units, those units had to compete for production capacity and new weapons not only with the rest of the expanding German Army, but also with the German Air Force. Hitler placed first priority on the Luftwaffe because of the intimidation value that air power gave him when dealing with the rest of Europe. Under the circumstances, Guderian had to settle for tanks that were not completely battle worthy. The Mark I was really a machine gun-armed tankette, derived from the British Carden-Loyd personnel carrier. The Mark II did have a 20-mm cannon, but little armor protection. These two vehicles made up the bulk of panzer units until 1940.[13] Their value lay not so much in their armor and armament, but in the fact that they were available early, in considerable numbers, and with radio communications. This allowed the new panzer force to conduct extensive training, establish battle procedures, identify and solve problems, and develop changes in organization and equipment. By 1939, the panzer divisions were not completely ready, but they had gone through their first, most necessary stages of organization and training. Such an advantage was denied to most of Germany's opponents.

Another German advantage was in the field of close air support of ground operations. When the Luftwaffe was established in 1933, most of the higher commanders were World War I aviators and others who had served in the ranks of the 100,000-man army imposed by the Versailles Treaty. Initially, the Luftwaffe, like other air services, favored missions such as strategic bombing and air superiority to the neglect of supporting ground forces. The experience of the Spanish Civil War (1936–39) changed priorities to some extent. The German force sent to aid Franco used a limited number of obsolete fighters in a ground-attack role, with considerable effect. These experiences provided the impetus for Germany to create five ground-attack aviation groups in the fall of 1938. Ernst Udet, the chief of the Luftwaffe's development branch after 1936, persuaded his superiors to produce a limited number of close support dive-bombers patterned after the U.S. Navy's Curtiss Helldiver. The resulting JU-87 Stuka dive-bombers equipped four of the five ground-attack groups during 1939. Dive-bombers were extremely accurate and demoralized ground defenders rapidly. In addition, in both Spain and Poland a very small number of air liaison detachments were attached to the infantry corps and armored division headquarters making the main attack. These detachments could pass air-support requests directly to the Luftwaffe and could monitor in-flight reconnaissance reports. They could not, however, actually guide the aircraft onto targets without departing the ground headquarters to which they were attached, nor did they have training for such a role. In any event, the handful of divebomber groups and air liaison detachments was available only to the army units at the point of main effort; all other army headquarters had to submit preplanned requests that might or might not be honored. In 1939, on-call air support against targets of opportunity was well in the future for most of the German Army.[14]

Thus the tradition of combined arms integration was continued and updated in the German Army between the world wars. Guderian was tactically incorrect when he denied the need to provide armor and motorized equipment for the other elements of an army that remained essentially foot-mobile and horse-drawn. His determined opposition, however, did enable Germany to keep the majority of its mechanized assets concentrated in combined arms mechanized units, despite the equipment given to other branches. In September 1939, twenty-four out of thirty-three tank battalions and 1,944 out of 3,195 tanks were concentrated in the six panzer divisions.[15] The contrast with other countries, where large numbers of tanks were dedicated to infantry support and cavalry roles, is striking.

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Reading 6

OVERLORD VERSUS THE MEDITERRANEAN AT THE CAIRO-TEHRAN CONFERENCES

Richard M. Leighton

The long debate between U.S. and British leaders over the strategy of the European war reached a climax and a turning point at the great mid-war conferences at Cairo and Tehran late in 1943. Since the decision to invade North Africa, a year and a half earlier, the debate had focused on the war in the Mediterranean, the British generally advocating a bold, opportunistic strategy, the Americans a more cautious one. On the surface, they had disagreed on specifics rather than fundamentals. Few on the American side advocated complete withdrawal from the Mediterranean, and U.S. leaders were as quick as the British to respond to the opportunity offered by the disintegration of Italian resistance in early summer of 1943. They opposed the British primarily on the choice of objectives, especially east of Italy. For their part, the British never questioned the principle that the main attack against Germany in the West, and the decisive one, must eventually be made from the northwest (OVERLORD) not the south. In the meantime, they argued, aggressive operations in the Mediterranean were not merely profitable but even essential in order to waste the enemy's strength and to contain and divert enemy forces that might otherwise concentrate on other fronts. But the debate was embittered by American suspicions that the British intended somehow to sidetrack, weaken, or indefinitely postpone the invasion from the northwest, subordinating it to

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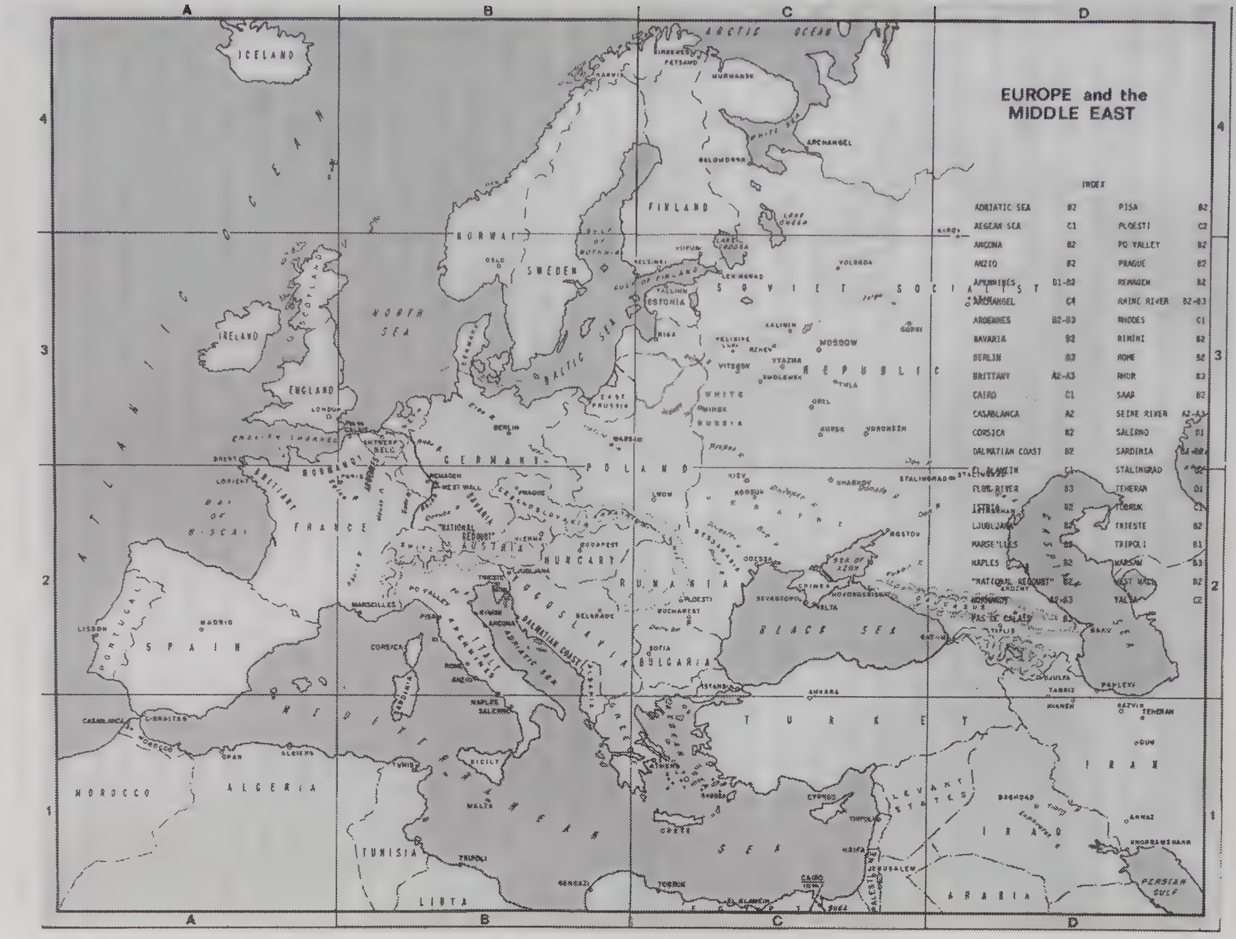
peripheral and indecisive ventures in the Mediterranean that would serve their own long-range political ends. Since the British consistently disclaimed such intentions, the issue of OVERLORD versus the Mediterranean could not be deflated as such—and, indeed, cannot now be proved even to have existed outside the minds of the Americans. For them, nevertheless, it was the real issue, and the question actually debated at Cairo and Tehran, whether OVERLORD should be postponed a few weeks in order to permit certain small-scale operations in the eastern Mediterranean, was only the shadow. From the American point of view, the great achievement of the conferences was not the compromise reached on the latter question—essentially a technical matter, worked out on the staff level—but the decision of the Big Three—Roosevelt, Stalin, and Churchill—to make OVERLORD and its southern France complement, ANVIL, the supreme effort of the Western Allies against Germany in 1944. After Cairo-Tehran, Mediterranean strategy continued to be a source of friction, but American leaders seemed to consider the cross-Channel invasion as assured and the issue of OVERLORD versus the Mediterranean as closed.[1]

Tools of Amphibious War

In November 1943 Allied military fortunes were high. On the Eastern Front Soviet armies had crushed the Germans' summer offensive against Kursk before it had got well under way, and had launched a series of powerful counteroffensives which by late November had driven the enemy across the Dnieper, isolated the Crimea, and, farther north, pushed almost to the Polish border. British and Americans in the Mediterranean had swept through Sicily in July and August, forced the capitulation of Italy, and invaded the peninsula in September, bogging down finally in the mountains south of Rome. (See Map 1.) The strategic bombing offensive against the German homeland continued with mounting intensity, despite heavy losses, and in early autumn the hitherto lagging build-up of American invasion forces in the British Isles swelled to massive proportions. In the Pacific war, the New Crimea offensive had reached the Huon Peninsula with the capture of the important enemy base at Finschhafen, the South Pacific campaign had advanced to Bougainville in the northern Solomons, and the push across the central Pacific had begun with fiercely contested landings on Tarawa and Makin in the Gilberts. In the Atlantic, the U-boats had been decisively defeated, and shipping losses reduced to negligible proportions. On all fronts except Italy and Burma the Allies were advancing. Germany's defeat was now predicted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for October 1944, and the American planning committees had been ordered to produce a scheme for ending the war against Japan within the year following. Optimism ran high.

Behind this optimism lay the realization that men and materials would be available on the scale needed to sustain and quicken the momentum already gained. The immense weight of Soviet manpower and industry, after more than two years of mobilization, was now making itself felt; Soviet armies, backed by masses of reserves and munitions, now had a capacity for sustained offensive warfare that the enemy no longer possessed. In the West, Britain's war effort had passed its peak, with armed forces fully deployed and manpower and industrial capacity fully engaged. American armed forces, on the other hand, though approaching the limits of their planned expansion, were still mostly uncommitted; the bulk of the U.S. Army was at home, waiting to be deployed overseas, and only a handful of divisions had actually seen action. American war industry by now had achieved a productivity that in many categories of munitions actually surpassed foreseeable needs. Military supply programs were already being cut back, and pressures were building up to expand production of civilian goods. The most spectacular achievement of American war production was in shipbuilding. American shipyards in this year poured out 19.2 million deadweight tons of merchant shipping, which was more than two and one-third times is much as had been built in 1942. Early in August, the Joint Chiefs of Staff informed the chairman of the War Production Board that they no longer expected merchant shipping to be the bottleneck of the overseas war effort.[2]

Only one category of supply—landing craft—threatened seriously to limit Allied strategy in 1944. At Cairo and Tehran, indeed, the apparent necessity of choosing between a postponement of OVERLORD and abandonment of planned or proposed amphibious operations elsewhere was dictated by the shortage of landing craft—more particularly, of one type of landing vessel, the Landing Ship, Tank (LST). Less than 300 LSTs were in existence in November, almost all built in the United States. Of these, 139 were in the Mediterranean—67 of them allocated to the British under lend-lease—and except for a small contingent were all earmarked for transfer to the United Kingdom for OVERLORD as soon as the amphibious phases of the Italian campaign were completed. For OVERLORD, in addition, the United States had agreed the preceding spring to provide 62 more new LSTs during the coming winters. The remaining new production of LSTs was allocated to the war in the Pacific.[3]

Production of LSTs and other landing ships and craft in the United States had been late in going under way, reaching large volume only in the winter of 1942–43 and then rapidly falling off. This first wave of production, aimed originally at the now discarded plan for a cross-Channel invasion in spring of 1943 (ROUNDUP), had proved generally adequate, together with the smaller output of British factories and yards, to meet the rather modest needs of Allied amphibious operations before mid-1943.[4] Even the invasion of Sicily, in some respects the most massive amphibious operation of the entire war (eight divisions were landed simultaneously), was adequately mounted without drawing upon a substantial reserve of U.S. assault shipping in the Atlantic or interfering with planned deployments of craft to the Pacific.[5]

From the Navy's point of view the whole landing craft production program had been undertaken at the worst possible time—when the Navy was straining to rebuild sea power destroyed or immobilized at Pearl Harbor and in later engagements, in order to gain supremacy in the Pacific, while at the same time trying to break the stranglehold of enemy submarines upon the sea lanes in the Atlantic. The program competed with many other lines of war production for materials, above all for the steel, engines, and facilities needed to build other types of combatant vessels. A Navy official commented bitterly in April 1943 that the high rate of landing craft construction achieved late in 1942 had been obtained "only by cutting across every single combatant shipbuilding program and giving the amphibious program overriding priority in every navy yard and every major shipbuilding company. The derangement . . . will not be corrected for about six months."[6] As landing craft schedules were terminated or cut back that winter and spring, the Navy pushed the building of escort vessels to meet the revived menace of the German U-boats in the Atlantic, which in March reaped a harvest of more than a million deadweight tons of Allied shipping.[7] Navy officials candidly wanted no more emergency landing craft programs.

By August 1943, however, pressures were building up to increase the output of landing craft, at a time when, as a result of the abatement of the submarine menace, the Navy was cutting back its escort and antisubmarine vessel programs. While the landings on Sicily had been successful, with losses lower than anticipated, the greater part of the entire amphibious fleet in the Mediterranean was tied up for weeks after the initial landings moving supplies over the beaches and performing other administrative tasks. Other amphibious undertakings were in prospect in the Mediterranean, in southeast Asia, and on the two main avenues of advance toward Japan across the Pacific. The biggest prospective deficit of amphibious shipping, however, loomed in the planned cross-Channel assault, then scheduled, as a result of decisions at the Washington Conference of May 1943, for the spring of 1944. For this undertaking, against what was expected to be the most heavily defended coast line in the world, the assault as then tentatively planned was to be on a scale of only about three and a half divisions with two more afloat, a limit imposed arbitrarily by the predicted availability of assault shipping. At the Quebec Conference of August 1943 Prime Minister Churchill bluntly called for an immediate increase in American landing craft production, pledging at the same time a maximum effort in his own country, in order to strengthen the OVERLORD assault. The same demand was voiced on the American side in various quarters.

In September and again late in October, the Navy with JCS approval ordered large increases in landing craft production. Navy officials framed the new program, however, with an eye to the war in the Pacific, not the war in Europe. Large segments of the program were devoted to new types of vessels mainly adapted to warfare in the Pacific—notably armored amtracks (LVTs) and the new LCT(7), actually a small landing ship—inevitably at the expense of the older types desperately needed in Europe. Nor would the increases become effective in time to help OVERLORD if the operation were carried out early in May 1944. Allocations of new production to OVERLORD were limited to about three months' output, at current low rates, at the end of 1943. To this Admiral Ernest J. King, on 5 November, promised to add something less than a month's production of LSTs, LCI(L)s, and LCTs, and not all of these seemed likely to arrive in the United Kingdom in time to be used in the invasion.[8]

A month before the Allied leaders assembled at Cairo, U.S. representatives at a conference of foreign ministers in Moscow pointed to the new landing craft program as indisputable proof that the long-postponed second front would be opened the following spring. In Washington, by contrast, the British were being warned privately that no more new landing craft would be forthcoming for OVERLORD.[9] It was the latter assumption that shaped the options laid before the conferees at Cairo and Tehran.

Alarums and Excursions

American military leaders and their staffs, on the eve of the Cairo-Tehran Conferences, were in a mood to force a showdown on the strategy of the European war.[10] As they viewed it, Allied strategy since the decision to invade North Africa had been drifting steadily away from the northwestern Europe orientation, agreed on in April 1942, and into a peripheral line of action that could only end in stalemate. Preparations for a cross-Channel invasion in spring of 1943 had been suspended, the British Isles almost denuded of American troops, and American resources had been diverted into the development of a new line of communications and a new invasion base in North Africa. The decision at Casablanca in January 1943 to attack Sicily had ensured that the Mediterranean would continue to be the main theater in Europe during 1943 and that no cross-Channel invasion could be attempted until 1944 at the earliest. Since then British persuasion and the ineluctable logic of momentum had drawn the Allies deeper into the Mediterranean—into Tunisia, Sicily, Italy, Sardinia, Corsica—and a long, uphill struggle still loomed ahead in Italy. Most alarming to the Americans was the persistent effort of the British to broaden the Mediterranean front eastward—by pressure on Turkey to enter the war, by proposals to seize points on the Dalmatian coast and to step up aid to the Balkan guerrillas, and, most recently, by an ill-advised incursion into the Dodecanese Islands which had cost the British several thousand troops killed and captured and untold loss of prestige. Persistent dabbling by the British in this region raised, in American minds, the dread specter of military operations and political involvement in the Balkan peninsula, a land of inhospitable terrain, primitive communications, and turbulent peoples.

In the light of developments in the Mediterranean, American military leaders discounted the repeated pledges of loyalty by the British to the cross-Channel invasion strategy. They tended to gloss over or ignore the immense investment Britain already had in the cross-Channel operation, the heavy contributions of British shipping to the build-up of American invasion forces and material in the United Kingdom (almost half the entire tonnage used), and the persistent pleas of British leaders for a strengthening of the OVERLORD assault. It was widely believed in American official circles that British leaders feared to come to grips with the German Army on equal terms, that they were haunted, as Secretary of War Stimson put it, by the "shadows of Passchendaele and Dunkerque."[11] Army staff officers, wrestling with the paradox, could only conclude that the great Anglo-American invasion army amassing in the United Kingdom was intended by the British to be "a gigantic deception plan and an occupying force" after the expected German collapse.[12]

In recent weeks American suspicions of British intentions had quickened. At the Quebec Conference in August, the OVERLORD plan prepared by the Anglo-American planning staff in London had been accepted by both sides with little discussion. But the British had rejected an American demand that OVERLORD be given an "overriding" priority over operations in the Mediterranean. Prime Minister Churchill, then and subsequently, had stressed, to a degree that aroused American misgivings, the stipulations written into the OVERLORD plan to the effect that additional forces would be needed if German strength in France exceeded certain levels. As yet, the Americans had not made an issue of this point, since the JCS had approved the stipulations along with the plan. Then, late in October, a crisis had suddenly developed in Italy when it appeared that the Germans were winning the build-up race south of Rome and might soon be in a position to launch a crushing counterattack. Churchill and the British Chiefs had reacted with what the Americans considered unjustified alarm. The British had proposed the temporary retention in the Mediterranean of all assault shipping earmarked for OVERLORD, and, more disturbing, had intimated that if the situation in Italy continued to deteriorate it might be necessary to postpone OVERLORD beyond its present target date of 1 May 1944. After some discussion, it had been agreed that sixty-eight OVERLORD LSTs should remain in the Mediterranean until mid-December, as the theater commander, General Dwight D. Eisenhower, had requested, to help mount an amphibious turning movement around the enemy's right flank south to Rome. But the JCS and their staffs were still worried, as the time for the Cairo meetings approached, over the implied British threat to OVERLORD. For the British Chiefs had bluntly warned that they intended, at the forthcoming conference, to bring up for reconsideration "the whole position of the campaign in the Mediterranean and its relation to OVERLORD."[13]

Finally, early in November, the Americans received a disturbing hint of the role the Soviet leaders might play at Tehran. At the foreign ministers' conference in Moscow late in October, Marshal Joseph V. Stalin had displayed a lively interest in the operations of his allies in the Mediterranean, and, to the astonishment of the Western representatives, had reacted with bland unconcern when British Foreign Secretary Anthony Eden had hinted that, owing to the worsening situation in Italy, it might be necessary to postpone OVERLORD. After the conference, Maj. Gen. John R. Deane, head of the U.S. military mission in Moscow, had been bombarded by complaints from the Soviet staff about Allied inaction in the Mediterranean. Deane had concluded from all this that the Soviets, as he informed Washington, "want to end the war quickly and feel they can do it," and therefore were less interested in OVERLORD, six months or more distant, than in immediate action to draw German strength from the Eastern Front. Deane warned his superiors to expect a Soviet demand at the forthcoming conference for a greater effort in the Mediterranean, including "some venture in the Balkans," even if that meant delaying OVERLORD.[14] Deane's warning caused a furor in Washington, where it was apparently taken at face value. Combined with the disturbing hints from London of an impending attack on OVERLORD, it conjured up nightmarish visions of a concerted Russo-British demand at Tehran for a major shift of effort to the Mediterranean—or worse, to the eastern Mediterranean—at the expense of OVERLORD.[15]

First Cairo: The Options

At Cairo, the Americans found that the British, too, were ready for a showdown. "It is certainly an odd way of helping the Russians," declared Churchill after a scathing review of recent setbacks in the Mediterranean, "to slow down the fight in the only theatre where anything can be done for some months."[16] The British Chiefs of Staff seized the initiative with a blunt criticism of American insistence on the "sanctity of OVERLORD."

> We must not . . . regard OVERLORD on a fixed date as the pivot of our whole strategy on which all else turns. In actual fact, the German

> strength in France next Spring may, at one end of the scale, be something which makes OVERLORD completely impossible and, at the other end, something which makes RANKIN not only practicable, but essential.... This policy, if literally will inevitably paralyze action in other theatres without any guarantee of action across the Channel ... it is, of course, valuable to have a target date to which all may work, but we are firmly opposed to allowing this date to become our master....

They were prepared, they asserted, to carry out the cross-Channel invasion "as soon as the German strength in France and the general war situation gives us a good prospect of success," but they insisted that unless the Allies pursued an aggressive course of action in the Mediterranean during the coming winter and spring, such conditions were unlikely to develop.[17]

The ominous implications of this manifesto were hardly borne out, however, by the British Chief's concrete program for the Mediterranean. They wanted to advance beyond Rome only as far as the Pisa-Rimini line (the same limit the JCS had in mind); to extend more aid to the Balkan partisan forces in the form of weapons, supplies, technical assistance, and commando raids; to try to bring Turkey into the war before the end of the year; and, with Turkish consent, to open the Dardanelles (shortest route to the USSR) to Allied shipping. The opening move, provided Turkey's support were assured, would be an attack about February 1944 on the largest of the Dodecanese Islands, Rhodes, which commanded the approaches to the Aegean and the Straits. Finally, control of the whole Mediterranean area would be unified under a British commander. (This last the Americans were already prepared to concede, in return for the appointment of a U.S. commander for OVERLORD.) In short, the British hoped by means of a major effort in Italy and what Ambassador Winant called "bush-league tactics" east of Italy to force the Germans back along the entire Mediterranean front. By the Prime Minister's reckoning, the eastern Mediterranean operations would involve not more than a tenth of the combined British and American resources in the whole theatre. But, while all the troops and other means needed were available in the area, the landing ships and craft were scheduled for early transfer to the United Kingdom. To retain them for the required time might mean postponing OVERLORD as much as six weeks or two months—that is, until about 1 July 1944.[18]

As far as Italy and the Balkans were concerned, the U.S. Chiefs had no quarrel with these proposals. They even saw certain advantages in gaining Turkey as an active ally, provided the price paid for intervention was strictly limited. But they doubted the ability of the Turks to hold their own if attacked by the Germans, and felt no enthusiasm for another try at Rhodes, so soon after the recent disaster. Moreover, the American staffs challenged the timetables and requirements of the British plan at many points. They doubted whether the

Rhodes operation could be fitted into the LST movement schedules, even if OVERLORD were postponed to 1 July.[19]

The British, however, had an alternative proposal: the necessary assault shipping for the Rhodes operation might be taken from southeast Asia. In August a new Allied command had been set up in southeast Asia under Vice Adm. Lord Louis Mountbatten, embracing Burma, Ceylon, Siam, the Malay Peninsula, and Sumatra (but neither China nor India). Since then the basic divergence of British, American, and Chinese purposes in the area, not to mention the differences within each camp, had been sharpened. British aspirations looked primarily south and southeast, toward a restoration of Britain's prewar possessions and influence in Malaya and the East Indies. The Americans were more interested in increasing China's effectiveness as an ally and in gaining bases in China for bombing and, ultimately, invading Japan. For the British, therefore, Burma was a stage on the road to Singapore and beyond—one that might, perhaps, be bypassed—while for the Americans it lay on the route over the Himalayas into China. Although construction had begun early in 1943 on a road from Ledo, in India's Assam Province just over the Burmese border, to connect with the old Burma Road where it crossed into China, contact between China and her allies depended for the present on the airlift. Throughout 1943 supplies delivered over the Hump from India to China each month had not exceeded, on the average, what could be carried by a single medium-sized freighter. Competition for this trickle of cargo was fierce. Lt. Gen. Joseph W. Stilwell, Mountbatten's American deputy and Commander of the U.S. China-Burma-India theater (lying partly within Mountbatten's command), wanted to use the supplies mainly to equip Chinese forces in China in order to help in the reconquest of northern Burma, scheduled to begin early in 1944 before the onset of the spring monsoon. Maj. Gen. Claire L. Chennault, commanding the U.S. air forces in China, believed the airlift should be greatly expanded and devoted entirely to support of an air offensive against Japanese communications in China and with the home islands. Chennault's program, which promised quicker results at lower cost than Stilwell's long-range plan of regenerating Chinese armies and restoring land communications with China, appealed both to the President and to Chiang Kai-shek, though the latter naturally demanded an airlift large enough to support both programs. Since the preceding spring the bulk of supplies brought over the Hump had in fact gone to Chennault's air forces. However, Roosevelt's broader aims for China coincided with Stilwell's. His purpose in inviting Chiang to Cairo (over British objections) was, in part, to discuss further economic and military aid—which was imperative, Chiang said, if China were to continue fighting—and, in part, to enlist his co-operation in the forthcoming Burma offensive.

The general plan of this offensive was to launch converging drives into northern and central Burma—by British-Indian forces from the west, by Stilwell's American-trained Chinese from the northwest, and by Chiang's own armies from Southern China. Subsidiary features of the plan included a British naval demonstration in the Bay of Bengal by fleet units released from the Mediterranean after the Italian surrender, and an amphibious operation—although where this would be carried out was still somewhat uncertain. A year earlier Stilwell's plan for the reconquest of Burma had included a major amphibious attack on Rangoon; at the Washington Conference of May 1943 this had been scrapped, for lack of assault shipping, in favor of smaller landings near Akyab and on Ramree Island, along the Burma coast just below the Indian border. To mount these operations, a contingent of half a dozen attack transports, eighteen LSTs, and a number of smaller craft, had been sent to India, arriving there finally, after a protracted hold-over in the Mediterranean, early in the fall. Churchill, meanwhile, had come out strongly for an "Asiatic-style TORCH" in the form of a surprise descent on the northern tip of Sumatra (CULVERIN), which the Americans opposed as eccentric to the main effort and his own advisers thought would require more resources than were available. The theater commanders, finally, had proposed a more modest substitute in the form of landings on the Amdaman Islands, southwest of Rangoon, in March or April 1944. This operation (BUCCANEER) had been tentatively endorsed by both the British and the U.S. Chiefs of Staff, though it, along with the remainder, of the whole plan, still awaited formal approval. BUCCANEER was, then, the amphibious part of the general plan (CHAMPION) submitted to Chiang at Cairo.[20]

Immediately the plan ran into heavy weather. Hardly anyone, in fact, had much enthusiasm for BUCCANEER, except perhaps Chiang, who had not been informed of its objective, but who independently suggested the Andamans as a suitable objective. Its most serious defect was that it seemed to have little connection with the mainland operations it was intended to support, and hardly represented a threat serious enough to provoke a strong reaction. The U.S. Chiefs of Staff preferred it to CULVERIN, but were not committed to any particular operation; Admiral King himself favored a landing on the mainland near Moulmein with a view to cutting across the isthmus to Bangkok, but such an undertaking was not thought feasible with the assault shipping available. Evidently the most that could be said for BUCCANEER was that it would provide a base for future amphibious landings on the mainland and for bombing the new Bangkok-Moulmein railroad, which gave the Japanese in Burma direct overland connections with the Gulf of Thailand.[21] Churchill made no secret of his distaste for BUCCANEER and had earlier declared that if he could not have CULVERIN he would send the British assault shipping back to the Mediterranean. At Cairo he expanded on the idea: if the Americans would not accept CULVERIN, and if they refused to postpone OVERLORD the few weeks necessary to carry out the attack on Rhodes and move assault shipping back to the Mediterranean, then why not take the shipping needed for Rhodes from southeast Asia? BUCCANEER might be postponed rather than canceled. As

Churchill remarked, “There really cannot be much hurry. The capture of the Andamans is a trivial prize compared with Rhodes, and also it can be undertaken at any time later in the year.”[22]

That Churchill was willing to entertain the idea of doing BUCCANEER at all, despite his candidly expressed scorn for the operation, was the result of the position taken at Cairo by the Chinese Generalissimo. Chiang immediately branded the whole Burma plan (CHAMPION) as inadequate. As a price for his participation in a more ambitious one, moreover, he demanded an immediate increase in the airlift far beyond the capacity of available transport aircraft and explicit guarantees from the British that the land operations would be supported simultaneously by major coordinated naval and amphibious attacks. The unreasonableness of the airlift demand, and the arrogance shown by Chiang’s subordinates in discussing it with the Western military leaders, caused the latter to close ranks, and drove even General Marshall to exasperation.[23] A moderate increase in the airlift was ordered, but the Chinese were told unequivocally that they must choose between an offensive in Burma and expanded ferry operations, since both competed for transport aircraft. As for BUCCANEER, the U.S. Chiefs of Staff did not at first take a strong stand, agreeing to postpone action pending decisions yet to be taken on the broader strategy of the war against Japan and the British role in it. In the CCS, therefore, Chiang's demand for an amphibious operation was carefully and noncommittally "noted," with a promise merely of future “consideration.” Churchill, however, sharply challenged Chiang’s view of the interdependence of the naval and amphibious phases of CHAMPION and the land operations. He pointed out that, in the absence of accessible bases and because of the time needed to refit and redeploy British naval forces from the Mediterranean, direct naval support could not be provided in the forthcoming spring campaign, even though he could promise that by March strong naval forces would be operating in the Bay of Bengal. Finally, he told Chiang emphatically that no definite undertaking to carry out an amphibious operation in conjunction with the land campaign could be given.[24]

Chiang thus faced defeat on all his demands. Early in the afternoon of the 25th he agreed to the CHAMPION plan as drawn, with the sole stipulations that the British should gain naval superiority in the Bay of Bengal—which Churchill had already promised—and that the plan should include an amphibious operation— to which Churchill was willing to agree if the Americans met his own conditions in the Mediterranean. At the same time, however, Chiang was demanding that President Roosevelt give him something to show for having attended the conference.[25] The President obliged. On the same afternoon he told Stilwell and Marshall he had decided, as a further concession to Chiang, greatly to change the program of equipping Chinese divisions, and, some time on the same day, he seems to have given Chaing a pledge that BUCCANEER would be carried out on the scale and at the time planned. [26]

The President's pledge left his military chiefs very little room for maneuver. If the Soviet leaders at Tehran should insist, as the Joint Chiefs fully expected them to insist, on an immediate major effort by the Western allies in the Mediterranean, with or without OVERLORD, approval of the British program seemed assured. The assault shipping allotted for BUCCANEER, now sacrosanct, could not be made available for Rhodes. If OVERLORD shipping currently in the Mediterranean were used instead, how could it be replaced in time to meet the OVERLORD target date? New American production after January was allotted to the Pacific, and Admiral King bristled at the suggestion of further inroads on this source. The only remaining possibility seemed to be to postpone OVERLORD a few weeks as the British had proposed, thus giving more time to redeploy assault shipping and, incidentally, making available another one or two months' production of landing craft. As Admiral Leahy remarked, the problem was brutally simple: the JCS had to decide whether or not they could accept a delay in OVERLORD; if they could not, "the problem appeared insoluble."[27]

The President, at least, had been thinking of delay. Back in Washington Justice James F. Byrnes, Director of the Office of War Mobilization, had received on the 23d a "very urgent" message from him inquiring whether the output of landing craft could be increased, by means of an overriding priority, during the *first five months of 1944*—an inquiry that made sense only under the assumption that OVERLORD might be postponed beyond 1 May 1944. Byrnes' reply, dispatched on the 25th, indicated that substantial increases might be possible in April and later, but virtually none before then. Roosevelt probably knew, therefore, when he promised Chiang an amphibious operation, that if OVERLORD were postponed to July, it could be bolstered by the addition of some twenty-two new LSTs, not to mention ten more now allocated but unlikely to reach the United Kingdom in time for a May assault—and this without encroaching on existing Pacific allocations of February and later output.[28]

Final decision had to wait, then, until the Russians showed their hand. At the last Cairo meeting with the British (on the 26th) before going to Tehran, the U.S. Chiefs of Staff stressed the sanctity of BUCCANEER, but said little about OVERLORD or the Mediterranean. Sir Alan Brooke asked them whether they understood that "if the capture of Rhodes and Rome and Operation BUCCANEER were carried out, the date of OVERLORD must go back." Marshall assured him they did. Would it not be better, urged Brooke perplexedly, to postpone BUCCANEER rather than OVERLORD? What if the Russians should demand both a strong Mediterranean offensive and an early OVERLORD? The situation had become embarrassing. Finally, Admiral Leahy blurted out a broad hint: the U.S. Chiefs of Staff "were not in a position to agree to the abandonment of Operation BUCCANEER. This could only be decided by the President and the Prime Minister." There was little more to say. The Americans accepted the British program as a basis for discussion at Tehran, but on the contradictory assumption that it "would in no way interfere with the carrying-out of Operation BUCCANEER." The British left with the distinct impression, as Lt. Gen. Sir Hastings L. Ismay reported to the Prime Minister, that the Americans, now rigid against any tampering with BUCCANEER, contemplated a postponement of OVERLORD "with equanimity." [29]

Tehran: Enter ANVIL Compromise on OVERLORD

At the opening general meeting at Tehran, on 28 November, the three principals, at Stalin's brusque suggestion, promptly got down to business. Roosevelt noted in his opening remarks the possibility that OVERLORD might have to be postponed "for one month or two or three," and spoke of the various operations in the Mediterranean that were being considered to relieve enemy pressure on the Eastern Front—in the Aegean, at the head of the Adriatic, and in Italy. OVERLORD, he pointed out, would draw away more German divisions than any of these, and he urged that, if possible, it not be delayed "beyond May or June." Churchill presented the British case, elaborating on the promising opportunities that could be exploited in the eastern Mediterranean without detriment either to the campaign in Italy or to OVERLORD. How would the Soviet Union, he asked, regard this prospect "even if it meant as much as about two months' delay in OVERLORD?"[30]

Up to this point the atmosphere had been cordial. To the pleased surprise of the Westerners, Stalin opened his remarks with an almost casual promise that the Soviet Union would intervene in the war against Japan as soon as Germany was defeated. This confirmed and strengthened the more tentative offers the Soviet marshal had made on earlier occasions. But his next words brought the discussion abruptly to a tense climax. He declared bluntly that the whole Mediterranean program appeared to him to involve an excessive dispersion of forces. OVERLORD should be made the "basic" operation for 1944, and all other operations, however attractive, regarded as diversions. He saw only one useful possibility in the Mediterranean, an attack on southern France (which Churchill had mentioned in his opening remarks) followed by a drive northward toward an eventual junction with the main OVERLORD forces—the classic pincers formula, which the Russians had applied so often in their own theater. Why not, he suggested blandly, suspend the Italian campaign immediately in order to release forces for this operation, and then launch OVERLORD two or three months later? [31]

General Marshall must have been reflecting sardonically, while Stalin was dropping his bombshell, on an innocent remark he himself had made in a meeting of the Joint Chiefs that morning, to the effect that the Soviet demands, whatever they might be, "would probably simplify the problem."[32] Whatever the reasons for the sudden evaporation of Stalin's recently displayed interest in Mediterranean operations, and for his return to the old familiar insistence on a "second front"—perhaps because, with Soviet armies now at a standstill in the Ukraine, a grand convergence on southeastern Europe no longer promised quick victory—his proposals immeasurably complicated what had been an essentially simple, if baffling, dilemma. The Mediterranean was a "going" theater of war in which the Western allies had a heavy investment. To stop short on the present line in Italy would be almost as repugnant to the Americans as to the British, and Churchill promptly and emphatically asserted that from the British point of view the capture of Rome was both strategically and politically imperative. Stalin seemed, moreover, not to have grasped the limiting role of shipping and landing craft, or the central problem of timing and sequence that grew out of it. He had to be reminded that the troops in the Mediterranean, except for seven divisions already in transit to the United Kingdom, were irrevocably bound there for lack of shipping to deploy them elsewhere. He missed the point that the southern France operation and the landings in the Adriatic had been suggested as mutually exclusive alternatives and that the Rhodes operation was very modest in scope. When Churchill reminded him of this last fact, he conceded that on those terms the capture of Rhodes might be worthwhile. But if both the Rome and Rhodes operations were to be carried out, or even only the latter, how could a landing in southern France, two or three months before OVERLORD (for which Stalin had stipulated no date) be worked into the schedule—unless OVERLORD was postponed?[33]

At this juncture the President, who had been silent during the above exchange, suddenly interposed. Stalin's proposals, he said, had raised a serious problem of timing. A choice must be made: either undertake Churchill's Aegean operations, which would delay OVERLORD a month or two, or, as the Soviet premier had suggested, "attack [southern] France one or two months *before the first of May* and then conduct OVERLORD *on the original date*." His own preference, Roosevelt added, was for the latter alternative.[34]

Churchill was caught off balance. Nothing in the President's earlier remarks had suggested any intention to insist on adherence to the 1 May target date for OVERLORD. He had, in fact, seemed to accept the idea of postponement, urging only that it be brief. His military advisers, by the end of the Cairo meetings, had seemed resigned to the inevitability of some delay. But by implying now that Stalin himself had demanded a 1 May date (which he had not, in fact, done), the President evidently hoped to enlist his support. If so, it was an adroit maneuver, for Stalin failed to challenge the President's implication. Its significance was not lost on Churchill, who immediately protested against the idea of condemning twenty or more divisions in the Mediterranean to inactivity "solely for the purpose of keeping the May date for OVERLORD," and chided the President for the "rigid timing" of the program he had proposed.[35]

The Russians had shown their hand. For the Americans the nightmare of an Anglo-Soviet demand for a shift to the Mediterranean had been dissipated in the comforting assurance that the Soviet leaders once more stood solidly for the primacy of OVERLORD and shared the American aversion for operations in the eastern Mediterranean. It quickly became clear, moreover, that the Russians also shared American suspicions as to British motives, for in the course of the next day (the 29th) both Churchill and Brooke, under Soviet grilling, were repeatedly obliged to go through the ritual of affirming their loyalty to OVERLORD.[36] At a meeting of the military representatives on this same day the Soviet leaders indicated no very specific notions as to what should be done in the Mediterranean or when. When Sir Alan Brooke pointed out the risk that a landing in southern France so long in advance of OVERLORD might be crushed before OVERLORD could get under way, the Soviet representative, Marshal Klementy Voroshiloff, merely reiterated rather woodenly his master's statement that the operation would be a valuable complement to OVERLORD. Anyway, he added, Stalin did not insist on a southern France operation. All other undertakings in the Mediterranean, "such as Rome, Rhodes, and what not," were diversions that, if carried out as all, should be "planned to assist OVERLORD and certainly not to hinder it." Evidently the Soviet leader intended to let his allies squabble unhindered over Mediterranean strategy. According to Voroshiloff, however, Stalin did insist on OVERLORD—and "on the date already planned."[37]

Thus the issue was finally joined on the timing of OVERLORD. On this same 29 November Roosevelt, now committed to fight for a May OVERLORD and evidently confident that with Soviet support he could win, sent a message to Washington tardily instructing justice Byrnes to call off the proposed speed-up in landing craft production, since "the increase in critical types … does not become effective enough to justify change in present construction programs. [38] At the plenary meeting that afternoon, Stalin set forth his position in the language of an ultimatum. He also pressed for an early appointment of a commander for the operation. Soviet forces, he promised, would match the invasion from the west by a simultaneous offensive from the east. [39] Churchill held the floor for most of the session with a spirited defense of the British Mediterranean program. He vainly tried to draw out Stalin on his proposal for a southern France operation, for which, as he pointed out, no plan had yet been drafted, and he warned, as Brooke had already done, that if the attack were too weak or launched too early, it would invite disaster. If, on the other hand, a two-division amphibious lift could be left in Mediterranean, bright possibilities opened up—turning movements along the Italian coasts, then a swift capture of Rhodes, and finally an invasion of southern France in conjunction with OVERLORD. This might mean setting back OVERLORD by six to eight weeks, or—and Churchill here introduced the alternative for the first time at Tehran—the needed assault shipping could be brought back from India. At all events, Churchill concluded, if the handful of vessels needed for Rhodes could not somehow be found, it was unreasonable to suppose that the larger number required for an invasion of southern France or another diversionary operation in support of OVERLORD could be provided. He reminded the Soviet premier that OVERLORD could not be undertaken at all unless there was a reasonable expectation of success based on certain specified conditions of enemy strength. This brought from Stalin his celebrated query: Would OVERLORD be ruled out if there were thirteen instead of twelve mobile German divisions in France and the Low Countries on D Day? Churchill assured him it would not.[40]

Stalin made no effort to answer Churchill's arguments. He ignored the allusion to BUCCANEER, restated his demand for a May OVERLORD, and indicated his preference for a southern France invasion two or three months before OVERLORD; if this proved impossible, the operation might be launched simultaneously with OVERLORD or even a little later. All other operations in the Mediterranean he regarded as diversions. Roosevelt finally interposed to suggest a date for OVERLORD "certainly no later than 15 or 20 May, if possible." Stalin chimed agreement. Churchill promptly and emphatically dissented, and the atmosphere again became tense. Finally, the problem was referred to the military representatives to work out before the next afternoon, when final decisions would be reached.[41]

Despite the appearance of a deadlock, the germ of a compromise had already emerged. Both Stalin and Roosevelt had refrained from demanding a 1 May date. Before lunch the next day (30 November) Churchill decided to agree to a date sometime in May, and the British Chiefs of Staff came to the meeting with their American opposites that morning with specific proposals worked out on this basis.[42] General Eisenhower would be allowed to keep the sixty-eight OVERLORD LSTs in the Mediterranean until 15 January in order to ensure the early capture of Rome. This meant, by British calculations, that OVERLORD could not be earlier than June—but the British Chiefs were willing, in order to satisfy Stalin, to define this as "in May." They were also prepared to support an operation against southern France and, most important, to agree that no assault shipping earmarked for OVERLORD should be retained in the Mediterranean specifically for the Rhodes operation. The key to this last concession lay in their final proposition: as a result of Stalin's momentous pledge on the 28th to enter the war against Japan after Germany's defeat, they argued, the role of China in the coalition had been automatically reduced, and the whole case for inoffensive in Burma in spring 1944, including BUCCANEER, had been weakened. The British now hoped, in short, to persuade the Americans to cancel BUCCANEER and send its assault shipping back to the Mediterranean, where it could be used to help mount the southern France operation—and, as a likely by-product, the attack on Rhodes as well. If the Americans refused to cancel BUCCANEER, the burden would be upon them to find the assault shipping for Southern France elsewhere, leaving the same probability that it could also be used for Rhodes.[43]

Meanwhile, the U.S. Chiefs of Staff, feeling confident in the assurance of Soviet support, had worked out their own position. The assault shipping already in the Mediterranean could be safely kept there until mid-January, as General Eisenhower had asked, to support the Italian campaign, without endangering an early May OVERLORD. With what remained after the withdrawals, the staff estimated, it would be possible to mount a two-division assault against southern France (now labeled ANVIL). This operation, for tactical and strategic reasons, should be launched no earlier than three or four weeks before OVERLORD rather than on the date suggested by Stalin. But the later date would not leave time, the Americans emphasized, to shift any of the landing craft over to the eastern Mediterranean for an attack on Rhodes and get them back to Corsica in time to refit for the ANVIL landings. *Ergo*—no Rhodes operation. The problem, as Admiral Leahy triumphantly summed up, "seemed to be a straightforward one of the date of OVERLORD."[44]

The argument that a southern France operation would be feasible but a Rhodes operation would not hinged on logistical calculations of an extremely speculative character. While these calculations, involving forward projections of landing craft availability, could not be positively disproved at the time—although the British challenged them at every point—the case for the ANVIL landings seemed particularly flimsy. Sir Alan Brooke could cite against it the verdict of General Eisenhower, a month earlier, that the assault shipping remaining in the Mediterranean would suffice for no more than a one-division lift, that the build-up following the assault would be very slow, and that no attack on such a scale would be likely to succeed.[45] The British did not believe the OVERLORD shipping could be moved back to the United Kingdom, after mid-January, in time for a May D-Day, and they feared, incidentally, that the landing craft allotted for OVERLORD were inadequate.

Caught between contradictory logistical estimates, the discussion deadlocked. Nevertheless, the afternoon deadline was at hand, and the Russians had to be given an answer. The military leaders agreed, therefore (falling back on the subterfuge suggested by the British), that the Russians could be told "we will launch OVERLORD during May, in conjunction with a supporting operation against the south of France on the largest scale that is permitted by [available] landing craft," with a target date, for planning purposes, the same as that for OVERLORD. The advance in Italy would continue as far as the Pisa-Rimini line, and the sixty-eight LSTs requested by Eisenhower would be left in the Mediterranean until 15 January. The fate of BUCCANEER and the Aegean operations was reserved for discussion at Cairo.[46] Thus the difficult questions of timing and provision of means raised by Stalin's bombshell on the 28th were left unanswered, and no breath of discord ruffled the meeting of the principals on the afternoon of the 30th, when the military decisions were ratified. It was inconceivable, Churchill declared, "that the two nations, with their great volume of production, could not make the necessary landing craft available."[47]

Whatever else they did, the Tehran decisions did not spell defeat for the British program in the Mediterranean. The heart of that program—capture of Rome and advance to a defensible line beyond—now seemed assured, even though it had been the first target of Stalin's attack. The modest proposals for the Balkans had been accepted. American opposition had centered on the Aegean operations, for which Admiral King had warned he would not under any circumstances turn over American landing craft.[48] Nevertheless, the prospects of mounting the attack on Rhodes had been immeasurably improved by the introduction of an assault lift requirement for ANVIL, and Stalin had supported the British view, which was written into the formal conclusions of the Tehran Conference, that Turkey should, if possible, be brought into the war before the end of the year. The attitude of the Turks themselves, on which the whole enterprise would depend, was soon to be tested anew in negotiations at Cairo. At all events, the British left no doubt in American minds that they intended to press forward with their American plans, and that, in view of Stalin's firm pledge of participation in the war against Japan, they now regarded BUCCANEER as fair game.[49]

Second Cairo: Scratch BUCCANEER

Back at Cairo, the CCS faced the task of finding enough assault lift to carry out (1) a late May or early June OVERLORD, (2) a simultaneous southern France operation, (3) the British attack on Rhodes, as soon as possible following the impending landings South of Rome, and (4) BUCCANEER, still scheduled for March. The British promptly renewed their attack on BUCCANEER. The operation was now even more vulnerable than before, since the receipt of Mountbatten's most recent plan which provided for a considerably stronger assault, with increased requirements for assault shipping and carrier-borne aviation. The ends in view seemed hardly commensurate with the cost, for more than 50,000 troops were to be concentrated against a garrison estimated at only about 5,000. The British insisted, moreover, on debating the larger issue of the whole campaign in Burma, which, in view of American plans for the Pacific and Stalin's firm promise to enter the lists against Japan, seemed to them to make little sense. The JCS were mainly worried lest, in the absence of an Allied offensive in

Burma, the Japanese might seize the initiative and overwhelm the precariously defended American air bases in China. But they found it difficult to defend BUCCANEER on its merits. General Marshall candidly admitted that if the operation could be dropped without wrecking the mainland campaign, "he personally would not be seriously disturbed."[50]

Whatever the defects of BUCCANEER, the JCS were, of course, no more inclined than before to release its assault shipping if the craft were to be used to mount an attack on Rhodes. But the British adroitly shifted ground. They now soft-pedaled their Aegean plans (which depended mainly on the outcome of negotiations with the Turks, anyway), and concentrated on the problem of mounting an adequate attack against southern France, to which the Americans were firmly committed. ANVIL, they argued, must not be tailored to the leavings of other undertakings (as implied in the Tehran formula), but should be made strong enough to form a genuine complement to OVERLORD. This meant an assault by at least two divisions, perhaps three. But when the staffs checked their hasty Tehran estimates against the more ample data available at Cairo, they found that the residual assault lift in the Mediterranean, after OVERLORD withdrawals, would not exceed one and two-thirds divisions and might be even less. After a halfhearted attempt to hew to the Tehran line, the JCS conceded the need for at least a two-division assault, and on 4 December Admiral King, in a surprise move, offered to meet the ANVIL assault shipping deficit from new production previously allotted to the Pacific.[51]

King's offer opened no breach in the opposition of the JCS to the Rhodes operation, since, as he made clear, the new ships and craft could not reach the Mediterranean in time to be used for it. On the other hand, although they almost covered the calculated deficit against a two-division ANVIL assault, they did not guarantee this operation.[52] They left no margin for unforeseen contingencies, and many on the American as well as on the British side considered even a two-division assault too weak. There was, moreover, growing uneasiness over OVERLORD's own weakness, even after the allocations of 5 November. Time was growing short. OVERLORD and ANVIL were now designated the supreme operations for 1944; the responsible commanders were about to be named,[53] and few doubted that when they reviewed the existing plans they would demand a more ample provision of means. At the plenary meeting on 5 December Harry Hopkins elicited from the military leaders, after some sharp cross-questioning, the remarkable admission that although they had given the stamp of approval to a two-division ANVIL and a three and a half division OVERLORD, they believed nevertheless that both operations should be strengthened.[54]

After two days of discussion at Cairo, the problem had thus taken on new dimensions. It was no longer a question of mounting the ANVIL assault at a fixed scale. Now it seemed necessary to provide a pool of assault shipping large enough to mount both ANVIL and OVERLORD on a scale as yet undetermined but adequate to give each a reasonable margin of safety. Precisely how much shipping would be needed could not be known until the plans themselves were revised and developed in detail. The very uncertainty on this score lent force to the British argument that it would be folly to commit precious assault shipping irrevocably to a venture in southeast Asia that even the U.S. Chiefs of Staff conceded to be of secondary importance.

At the plenary meeting on the 5th, Churchill bluntly pointed out that only the President's unilateral pledge to Chiang stood in the way of agreement. He suggested that Chiang might be offered some lesser substitute for BUCCANEER, which itself would then be postponed until after the monsoon. The remainder of the campaign could be carried out as planned. Hopkins supported this idea. The President, obviously unhappy, finally agreed to the suggestion that Mounibatten's representatives, then in Cairo, and Mountbatten himself should be queried as to what small-scale amphibious operations might be undertaken if he had to give up the bulk of his assault lift. At the same time the CCS were ordered to reexamine forthwith the two main European operations "with a view to increasing the assaults in each case." Roosevelt's full capitulation swiftly followed. That same afternoon, after consulting with his advisers (only King, in the JCS, held out against postponing BUCCANEER), he sent Churchill a brief message: "BUCCANEER is off."[55]

The Joint Chiefs were not informed of the decision until the next day, but they must have realized, after their meeting with the President, that it could not long be delayed. What now had to be decided were the precise alternatives to be offered Chiang. On the night of the 5th the British and U.S. planners made a list of various amphibious operations that might be undertaken in Burma during the spring, assuming arbitrarily that the shipping to be withdrawn from the theater would comprise most of the LSTs, combat loaders, and small aircraft carriers. It was not an impressive list. The Joint Chiefs, studying it the following morning, were inclined to conclude that it might be better to give up serious amphibious ventures in the Southeast Asia Command altogether during this season, and transfer all the BUCCANEER assault shipping back to European waters. The British agreed. The CCS accordingly recommended that major amphibious operations in the Bay of Bengal be delayed until after the monsoon, and that Chiang Kai-shek be offered two alternatives: the mainland offensive as planned, with British naval control of the Bay of Bengal assured, but without BUCCANEER, for which would be substituted carrier strikes, commando raids, and bombardment of Bangkok and the railroad; or postponement of the mainland offensive, compensated for by increased airlift to China and more rapid development of the long-range bombardment program from bases in China. Later that day Mountbatten's reply came in, stating flatly that seaborne operations smaller than BUCCANEER would not be worth the effort. He proposed that, in anticipation of Chiang's probable reaction, only limited land operations in northern and central Burma and along, the Arakan coast be undertaken, and that the aim of opening the land route to China during this season be abandoned.[56]

By evening of the 6th all knew that the President, without informing the JCS, had decided to abandon BUCCANEER and, moreover, had already cabled Chiang the bad news, presenting the same alternatives arrived at by the Chiefs of Staff that morning.[57] Ching's reply had not yet been received, but the President was due to leave Cairo the following morning and the conference decisions could not wait. Accordingly, the two alternatives presented to Chiang were both included in the final SEXTANT paper approved by the President and Prime Minister at the plenary meeting on the night of the 6th.

In the light of the Generalissimo's known attitude, there could be little doubt that he would reject the first; there was considerable doubt that he would accept even the second. Actually, by ruling out any worthwhile substitute for BUCCANEER, and so informing the Chinese leader forthwith, the President had thrown away an option that might have been acceptable to Chiang, inasmuch as the latter had never been told precisely what sort of operation was contemplated, but only that it would be a major one. At the time the conference decisions were approved, however, the leaders had Mountbatten's word for it that nothing less than BUCCANEER would serve. Later in the month Mountbatten changed his mind, but by then the President's message had left Chiang in no mood for compromise. In any case, Mountbatten's small residue of assault shipping was soon to be swallowed up in the maw of swelling European requirements. On 7 December the world-wide redeployment of assault shipping dictated by the SEXTANT decisions began as the CCS ordered Mountbatten to send fifteen LSTs and six assault transports—the bulk of his amphibious fleet—back to European waters.[58]

It has become almost a commonplace in American interpretations of World War II to say that at Tehran the British were forced to abandon their reservations concerning OVERLORD. Thus, it is asserted, the primacy of OVERLORD vis-à-vis the Mediterranean, and, indeed, its execution were finally assured.[59] Like the classic query, "When did you stop beating your wife?" this interpretation accepts as fact what is actually the nub of the issue, namely, the American allegation that the British, and Churchill in particular, had never intended to go through with OVERLORD and only resigned themselves to do so under Soviet pressure at Tehran. In reality, both Churchill and Brooke, forced repeatedly by the Russians to state their intentions concerning OVERLORD, held firmly to their position. At the end of the conference it was what it had been before: OVERLORD would be the main effort of the Western Allies in Europe, and, as far as the British were concerned, it would be carried out, as Churchill told Stalin on 30 November, "provided the enemy did not bring into France larger forces than the Americans and British could gather there."[60] In essence, this was the reservation already spelled out in the OVERLORD outline plan and accepted by the U.S. Chiefs of Staff themselves. Whether British leaders secretly harbored reservations of a more far-reaching nature is not known now (except by themselves) and probably will never be known. Certainly, the

Americans had no basis at the time, other than hearsay, for suspecting that they did. The historian's position is likely to depend largely on where he decides to place the burden of proof—on the Americans to demonstrate that their suspicions were based on fact, or on the British to show that their professions were sincere.

As for Stalin's stand on OVERLORD, it was no more than a restatement of the familiar "second front" theme dinned into Western ears from the time of the German invasion of Russia down to the Moscow Conference of October 1943. It may be doubted whether Stalin was taken in by the transparently vague formula finally decided on to define the target date for the operation, but there is no indication that he attached any importance to it. His whole attitude at Tehran toward the timing of OVERLORD and supporting operations in the Mediterranean was one of lofty indifference. At all events, his pronouncements on OVERLORD added nothing to earlier Anglo-American agreements on the relation between the cross-Channel invasion and the Mediterranean. The most significant effect of Stalin's position was, not the essentially empty characterization of OVERLORD and ANVIL as "supreme" operation in 1944, but the CCS decision on 5 December to explore the possibility of strengthening the two assaults. This decision which virtually invited the responsible commanders to demand the means they considered necessary, formally recognized—what the JCS since spring of 1943 had refused to concede—that the limit placed on the size of the OVERLORD assault at the TRIDENT Conference was arbitrary and unrealistic. In principle, it represented a real vindication of the stubborn efforts by the British since early 1942 to obtain more American landing craft for OVERLORD.

How many would actually be forthcoming remained to be seen. For the present, over and above the allotments made at the TRIDENT and QUADRANT Conferences, the planners could count on the vessels released from southeast Asia, most of about two months of American production of LSTs, LCI(L)s, and LCTs, pledged by Admiral King on 5 November and 4 December, a handful of U.S. and British assault transports, and an indeterminate amount of new British LCTs. These additions, it was expected, "should provide a satisfactory lift both for OVERLORD and ANVIL." The expectation proved to be over optimistic.[61]

With relation to the war in the Pacific, Stalin raised an issue that was welcome to the British and may have been embarrassing to the U.S. Chiefs of Staff. No debate on the question is recorded, but the CCS, in making OVERLORD and ANVIL the "supreme" operations for 1944, agreed that "nothing must be undertaken in any other part of the world" to jeopardize their success. Never before had the cross-Channel operation been underwritten in such sweeping terms; the statement wiped out provisos, insisted upon by the JCS at the TRIDENT Conference, that in the face of reverses in the Pacific the United States would be obliged to expand her operations there, even at the expense of the effort in Europe. In principle, at least, the war in the Pacific was now subordinate to the war in Europe.[62]

Coming at the time they did, the decisions at Cairo and Tehran relating to the war in Europe have inevitably taken on a retroactive luster from the dramatic events of the following summer—the invasion of Normandy and southern France, the advance up the Italian peninsula, the sweep across France to the Rhine. The decisions foreshadowed the events; it is less certain that they shaped them as well. To contemporaries, indeed, it seemed as though the whole conference program was going awry almost before the ink was dry. As the Cairo meetings ended, the outlook for the attack on Rhodes was good. The British could reasonably count on using for it the ex-BUCCANEER assault shipping now on its way back to the Mediterranean, since the conference agreements stipulated only that any operations undertaken in the Aegean must be "without detriment" to OVERLORD and ANVIL.[63] Negotiations with the Turks were going well. Less than a week later, the Turks suddenly raised the ante on military aid demanded as the price of intervention, and by the 25th Churchill had abandoned his Aegean plans. Similarly, by the middle of the month the planned landings south of Rome, taken almost for granted at Cairo and Tehran, had been canceled owing to the failure of the American Fifth Army to reach positions within supporting distance of the target area. Later in the month, they were revived on a larger scale and, after a frantic search for the necessary assault lift, finally carried out late in January at Anzio. ANVIL, too, came under fire almost immediately, as the OVERLORD commanders laid claim to its allotted assault lift, and after protracted debate the plan was canceled. When the Allies finally invaded southern France in mid-August, the operation was no longer strategically related to OVERLORD and could not have been justified by the arguments used at Tehran.

As for OVERLORD itself, Stalin's unequivocal insistence upon the operation undoubtedly enhanced the likelihood that it would be carried out, even in the face of an unforeseen increase in German power. On the other hand, the massive preparations for the invasion had already generated a momentum difficult if not impossible to arrest. Any radical change of direction or of emphasis at this time—let alone later—would have caused an upheaval in plans and preparations more costly than many military defeats. As a practical matter, the war in Europe had progressed beyond the point of no return. Even the date was hardly any longer in the realm of strategic decision. After Tehran strategic planning was pointed toward a late May or early June OVERLORD (though the administrative staffs continued for some time to work toward an early May deadline), but in the end the actual date of the launching was shaped, as Churchill has remarked, mainly "by the moon and the weather."[64]

Notes

1. The present essay is condensed from several chapters of Richard M. Leighton and Robert W. Coakley, *Global Logistics and Strategy, 1943–1945*, a forthcoming volume in the series UNITED STATES ARMY IN WORLD WAR II, based on original research in the records of the Joint and Combined Chiefs of Staff, including the official minutes and papers of the Cairo-Tehran Conferences, and Army records in the custody of the Deputy Chief of Staff for Operations, G-3, filed in the Federal Records Center of the National Archives. A contrasting interpretation of the Cairo-Tehran Conferences will be found in another volume in this series, Maurice Matloff, *Strategic Planning for Coalition Warfare, 1943–1944* (Washington, 1959). The conferences are also described from various points of view in a number of other works in the series: Gordon A. Harrison, *Cross-Channel Attack* (Washington, 1951); Charles F. Romanus and Riley Sunderland, *Stilwell's Command Problems* (Washington, 1956); Forrest C. Pogue, *The Supreme Command* (Washington, 1954); and Louis Morton and Henry Morgan, The Pacific War: Strategy and Command, The Road to Victory (in preparation). Three other American studies deal with the Cairo-Tehran Conferences at some length: Herbert Feis, *Churchill, Roosevelt, and Stalin* (Princeton: Princeton University Press, 1957); William Hardy McNeill, *America, Britain, and Russia, Their Co-Operation and Conflict, 1941–1946* (London: Oxford University Press, 1953); and Robert Sherwood, *Roosevelt and Hopkins: An Intimate History* (New York: Harper & Brothers, 1948). The outstanding British interpretation is John Erhman, *Grand Strategy*, Vol. V, *August 1943–September 1944* (London: H.M. Stationery Office, 1956), in the official British *History of the Second World War.* (Permission to quote from this work has been received from the Controller of H.M. Stationery Office.) Of the large memoir literature, Winston S. Churchill's *Closing the Ring* (Boston: Houghton Mifflin Company, 1951) contains the most detailed and valuable account. The published memoirs of Admiral William D. Leahy, Admiral Ernest J. King, General Dwight D. Eisenhower, and Maj. Gen. John R. Deane are also useful, though sketchy on the conferences themselves. Arthur Bryant's two-volume biography of Lord Alanbrooke (General Sir Alan Brooke), *Turn of the Tide* and *Triumph in the West* (New York: Doubleday and Company, 1957, 1959), is also useful for the British position. Three American studies, recently published, contain brief, provocative analyses, from the American point of view, of the Anglo-American debate on European strategy in World War II: Kent Roberts Greenfield, *The Historian and the Army* (New Brunswick, N.J.: Rutgers University Press, 1954); Samuel Eliot Morison, *Strategy and Compromise* (Boston: Little, Brown and Company, 1958), and Trumbull Higgins, *Winston Churchill and the Second Front* (New York: Oxford University Press, 1957).

2. (1) Frederick C. Lane, *Ships for Victory: A History of Shipbuilding Under the U.S. Maritime Commission in World War II* (Baltimore, Md.: Johns Hopkins Press, 1951), pp. 601–05. (2) Gerald J. Fischer, *A Statistical Summary of Shipbuilding Under the U.S. Maritime Commission During World War II* (Washington, 1949), Table A-4. (3) Feighton and Coakley, Global Logistics and Strategy, 1943–1945, MS, Ch. X.

3. A few LSTs of special design were constructed in Britain early in the war. In origin, the LST was a British-designed vessel, like virtually all the landing ships and craft used in World War II. Under wartime agreements, the United States constructed most of the merchant and amphibious shipping used by both countries, thus enabling Britain, with limited building capacity, to concentrate on expanding its Navy.

   For figures on distribution of LSTs in November 1943 see CCS Memo for Info 175, 23 Nov 43, Landing Craft Reports, 1 Nov 43.

4. SLEDGEHAMMER, the tentatively planned emergency cross-Channel attack in fall of 1942, had been canceled, partly because of a shortage of assault lift, but for other reasons as well.
5. (1) Richard M. Leighton and Robert W. Coakley, *Global Logistics and Strategy, 1940–1943,* UNITED STATES IN WORLD WAR II (Washington, 1955), pp. 376–82, 602–03, 682–83. (2) George Mowry, *Landing Craft and the War Production Board* (WPB Study No.11, July 1944), Ch. II. (3) Jeter A. Isley, and Philip A. Crowl, *The U.S. Marines and Amphibious War* (Princeton: Princeton University Press, 1951), pp. 1–4, 47–48. (4) Harrison, *Cross-Channel Attack,* pp. 60–61. For a description of the various types of landing ships and craft, see *ONI 226, Allied Landing Craft and Ships* (Office, Chief of Naval Operations, April 1944).
6. JPS 152/1, 3 Apr 43, title: Production of Landing Craft.
7. Leighton and Coakley, *Global Logistics and Strategy,* 1943–1945, MS, Chs. I and III.
8. *Ibid.,* MS, Chs. X, XI.
9. *Ibid.*
10. This section is condensed from Leighton and Coakley, *Global Logistics and Strategy,* 1943–1945, MS, Chs. VI through X. For a good summary, see Harrison, *Cross-Channel Attack,* Ch. II.
11. (1) Henry L. Stimson and McGeorge Bundy, *On Active Service in Peace and War* (New York: Harper & Brothers, 1948), pp. 435–38. (2) Bryant, *Turn of the Tide,* pp. 573–76.
12. OPD paper [about 12 Nov 43], U.S. Courses of Action in Case Sextant Decisions Do Not Guarantee OVERLORD, Exec 5, Item 12a. See also various staff studies in ABC 381 Strategy Section Papers (7 January 1943), Numbers 131–95.
13. Memo, Representatives COS, in CCS 379,26 Oct 43, Opns in Mediterranean.
14. (1) Msg 51, Deane to JCS, 9 Nov 43, with related papers in Exec 5, Item 15, Env.3. (2) John R. Deane, *The Strange Alliance* (New York: The Viking Press, 1947), p. 35. (3) Churchill, *Closing the Ring,* pp. 286–89. (4) Cordell Hull, *Memoirs of Cordell Hull,* (New York: The Macmillan Company, 1948), Vol. II, p. 1301. (5) Ehrman, *Grand Strategy,* V, 100–101, 156–157.
15. Leighton and Coakley, *Global Logistics and Strategy,* 1943–1945, MS, Ch. X.
16. Quoted in Churchill, *Closing the Ring,* pp. 332–33. The Cairo-Tehran meetings lasted from 22 November through 7 December 1943. At Cairo Roosevelt, Churchill, and their military advisers met formally for the first time with Chiang Kai-shek. The Tehran meetings (28 November–1 December) brought the two Western leaders together with Premier Stalin for the first time. A second series of meetings, attended by British and Americans only, was held at Cairo on 2–7 December. See Matloff, *Strategic Planning for Coalition Warfare, 1943–1944,* Ch. XVI.
17. (1) CCS 409, Note by COS, 25 Nov 43, OVERLORD and the Mediterranean. (2) Ehrman, *Grand Strategy, V,* 109–12. RANKIN was one of several alternative plans for crossing the Channel in the event of a German collapse before the OVERLORD target date.
18. (1) CCS 409, cited n. 17(1). (2) Ehrman, *Grand Strategy,* V, 104–21, 165–67. (3) Min, 2d Plenary Mtg, SEXTANT, 24 Nov 43.
19. The discussion of these points is described in Leighton and Coakley, *Global Logistics and Strategy,* 1943–1945, MS, Ch. XI.
20. (1) Ehrman, *Grand Strategy,* V, 148–53. (2) Romanus and Sunderland, *Stilwell's Command Problems,* Ch. II. (3) [Mounibatten] *Report to CCS by Supreme Allied Commander, Southeast Asia, 1943–1945* (London: H.M. Stationery Office, 1951), p. 27. (4) Matloff, *Strategic Planning for Coalition Warfare, 1943–1944,* Ch. XVI, pp. 2–3.

21. (1) Mountbatten *Report, p.* 27. (2) Romanus and Sunderland, *Stilwell's Command Problems,* p. 51. (3) Ernest J. King and Walter Muir Whitehill, *Fleet Admiral King, A Naval Record* (New York: W.W. Norton & Company, Inc., 1952), pp. 509–10. (4) Ehrman, *Grand Strategy,* V, 162. (5) Min, CCS 129th Mtg, 24 Nov 43.

22. Msg, PM for CsofS Com, 21 Nov 43, quoted in Churchill, *Closing the Ring,* p. 686. (2) Ehrman, *Grand Strategy,* V, 114, 159. (3) Min, 2d Plenary Mtg, SEXTANT, 24 Nov 43. (4) Romanus and Sunderland, *Stilwell's Command Problems,* p. 66.

23. (1) See Marshall's outburst quoted in Joseph W. Stilwell, Theodore H. White, ea., *The Stilwell Papers* (New York: William Sloane Associates, Inc., 1948), p. 255. (2) Min, 129th Mtg CCS, 24 Nov 43. (3) Min, 130th Mtg JCS, 25 Nov 43.

24. (1) Churchill, *Closing the Ring,* p. 328. (2) Ehrman, *Grand Strategy,* V, 162, 164–65, 571. (3) Min, CCS 128th Mtg, 23 Nov 43. (4) Romanus and Sunderland, *Stilwell's Command Problems,* p. 65. (5) Min, 1st Plenary Mtg, SEXTANT, 23 Nov 43.

25. See Marshall's remark at the JCS meeting earlier in the day. Min, JCS 130th Mtg, 25 Nov 43.

26. The evidence on this last point is strong but not conclusive. Churchill *(Closing the Ring,* page 328) and Leathy (*I Was There,* page 201) both assert unequivocally that the pledge was given and Ehrman accepts this as fact *(Grand Strategy,* Volume V, page 165). Matloff *(Strategic Planning for Coalition Warfare, 1943–1944,* Chapter XVI) regards it as at least highly probable. Romanus and Sunderland, who give little attention to the amphibious phases of the war in Burma, do not mention the pledge, though they do mention the promise to equip more Chinese divisions. It may be significant that the President, in the interview with Stilwell and Marshall mentioned above, seemed from his remarks to have the Andamans operation on his mind. But the most convincing evidence is to be found, as shown below, in the abrupt change in the attitude and position of the JCS on the morning of 26 November.

27. Min, JCS 131st Mtg, 26 Nov 43.

28. (1) Msg, FDR to Byrnes, Dir OWM, 23 Nov 43, Exec 5, Item 14. (2) Msg, Byrnes to President, 25 Nov 43, in JCS Memo for Info 171, 27 Nov 43, ABC 561 (30 Aug 43). (3) Mowry, *Landing Craft and the WPB,* pp. 30–32.

29. (1) Min, CCS 131st Mtg, 26 Nov 43. (2) Ehrman, *Grand Strategy,* V, 166–67.

30. Min, 1st Plenary Mtg, EUREKA, 28 Nov 43.

31. (1) *Ibid.* (2) Ehrman, *Grand Strategy,* V, 174–76.

32. Min, 132d Mtg JCS, 28 Nov 43.

33. (1) Ehrman, *Grand Strategy, V,* 175. (2) Churchill, *Closing the Ring,* p. 355.

34. (1) Min, 1st Plenary Mtg, EUREKA, 28 Nov 43. (2) Ehrman, *Grand Strategy,* V, 176. [Italics supplied.]

35. (1) Min, 1st Plenary Mtg, EUREKA, 28 Nov 43. (2) Ehrman, *Grand Strategy,* V, 176.

36. (1) Min, Military Mtg, EUREKA, 29 Nov 43. (2) Min, 2d Plenary Mtg, EUREKA, 29 Nov 43. (3) See also Churchill's account of Stalin's attack on General Brooke at the banquet on the evening of the 30th, *Closing the Ring,* pages 386–88.

37. Min, Military Mtg, EUREKA, 29 Nov 43.

38. (1) Quoted in Mowry, *Landing Craft and the WPB,* p. 31. See also pp. 32–33. Actually, the program had already been accelerated, in response to Roosevelt's message of the 23d, since certain measures had to be set in train immediately, without waiting for the President's order. (2) See Leighton and Coakley, Global Logistics and Strategy 1943–1945, MS, Ch. X.

39. Min, 2d Plenary Mtg, EUREKA, 29 Nov 43. This was hardly a compelling argument for a May OVERLORD since the Russians, as the British pointed out, had never launched a summer

offensive in that month. According to Churchill, Stalin told him at lunch on the 30th that he wanted OVERLORD in May or in June in order for it to synchronize with the Soviet offensive. In the event, the latter jumped off on 23 June, two and a half weeks after OVERLORD. See Churchill, *Closing the Ring,* pp. 380, 383.

40. (1) Min, 2d Plenary Mtg, EUREKA, 29 Nov 43. (2) Churchill, *Closing the Ring,* p. 371. (3) Ehrman, *Grand Strategy,* V, 179.

41. (1) Min, 2d Plenary Mtg, EUREKA, 29 Nov 43. (2) Churchill, *Closing the Ring,* p. 370. (3) Ehrman, *Grand Strategy,* V, 180. (4) Sherwood, *Roosevelt and Hopkins,* p. 788. The British accounts indicate that both Roosevelt and Stalin gave the OVERLORD date as "in May," or words to that effect.

42. (1) Churchill, *Closing the Ring*, p. 376. (2) Ehrman, *Grand Strategy,* V, 181.

43. Ehrman, *Grand Strategy,* V, 181.

44. (1) Min, 132d Mtg CCS, 30 Nov 43. (2) Harrison, *Cross-Channel Attack*, p. 125. (3) James D. T. Hamilton, Threat to Southern France, in draft MS on the southern France operation, OCMH. The Americans had little reliable data on the southern France operation with them at Tehran. See Matloff, "The ANVIL Decision: Crossroads of Strategy," below.

45. (1) Min, 132d Mtg CCS, 30 Nov 43. (2) Msg NAF 492, Eisenhower to CCS, 29 Oct 43, quoted in Ehrman, *Grand Strategy*, V, MS, pp. 188–89.

46. (1) Min, 132d Mtg CCS, 30 Nov 43. (2) Ehrman, *Grand Strategy*, V, 182. (3) Msg FAN 281, CCS to Eisenhower, 1 Dec 43, Exec 3, Item 13.

47. Min, 3d Plenary Mtg EUREKA, 30 Nov 43.

48. (1) Min, JCS 131st Mts, 26 Nov 43. (2) See Hopkins' strong statement in Sherwood, *Roosevelt and Hopkins,* pages 793–96.

49. CCS Memo for Info 165, 2 Dec 43, Military Conclusions of the EUREKA Conference. It was also noted that Stalin had undertaken to attack Bulaaria if the latter attacked Turkey.

50. (1) Min, CCS 135th Mtg, 5 Dec 43. (2) Ehrman, *Grand Strategy*, V, 185–86. (3) Romanus and Sunderland, *Stilwell's Command Problems*, pp. 65–67. (4) Morton and Morgan, *The Pacific War: Strategy and Command, The Road to Victory,* MS, Ch. 1.

51. (1) Min, CCS 133d Mtg, 3 Dec 43. (2) Min, 3d Plenary Mtg, SEXTANT, 4 Dec 43. (3) CPS 131/1, 3 Dec 43, Amph Opns Against South of France. (4) Msg 10131, Adm Badger to VCNO, 5 Dec 43, Exec 5, Item 13. (5) CCS 424, Rpt by CPS and CAdC, 5 Dec 43, Amph Opns Against South of France. (3) Ehrman, *Grand Strategy,* V, 184, 187,195.

King's offer was accompanied by a warning that it might result in setting back the operation against Truk, the main Japanese base in the Caroline Islands. He did not mention that the JCS had already decided, some three weeks earlier, to suspend the attack on Truk pending the results of carrier raids to test whether it might be feasible to bypass the fortress. See Min, JCS 123d Mtg, 15 Nov, and 124th Mtg, 17 Nov 43, and Robert Ross Smith, *The Approach to the Philippines,* UNITED STATES ARMY IN WORLD WAR II (Washington, 1953), p. 6.

52. The total extra lift required was figured at 3 XAPs (mod)fied assault transports), 12 MT ships (freighters fitted for vehicle carriage), 26 LSTs, and 31 LCTs. King promised to provide the XAPs, the LSTs, and 26 of the LCTs. The MT ships were, or would be, available in the area; the five LCTs could be taken from craft earmarked for OVERLORD, to be replaced by others in the contingent promised for OVERLORD on 5 November. See CCS 424, 5 Dec 43, cited. n. 51.

53. The President announced General Eisenhower's appointment as OVERLORD command on 6 December.

54. Min, 4th Plenary Mtg, SEXTANT, 5 Dec 43.

55. (1) Churchill, *Closing the Ring*, p. 411. (2) Min, 4th Plenary Mtg, SEXTANT, Dec 43. (3) Ehrman, *Grand Strategy*, V, 190–92. (4) King and Whitehill, *Fleet Admiral King*, p. 425. (5) William D. Leahy, *I Was There* (New York: Whittlesey House, 1950), p. 213. (6) Sherwood, *Roosevelt and Hopkins*, p. 801.

56. (1) Min, 136th Mtg JCS, 6 Dec 43. (2) Min, 136th Mtg CCS,5 Dec 43. (3) Min, 137th Mtg CCS, 6 Dec 43. (4) CCS 427, Rpt by CPS, 5 Dec 43, title: Amph Opns in Southeast Asia Alternative to BUCCANEER. (5) Romanus and Sunderland, *Stilwell's Command Problems*, p. 70. (6) Ehrman, *Grand Strategy*, V, 192–93.

57. (1) Msg, President to Chiang, 5 Dec 43, Exec 10, Item 70. (2) Min, 5th Plenary Mtg, SEXTANT, 6 Dec 43. Since the CCS recommendations were those approved by the JCS and had been drafted by General Marshall, it is possible that Marshall had earlier shown this draft to the President and that the latter used it, but without informing Marshall. At all events it seems unlikely that the Chiefs of Staff could have known on the morning of the 6th that the President had already cabled Chiang, since they were discussing their own draft with a view to submitting it to the President. See Matloff, *Strategic Planning for Coalition Warfare, 1943–1944*, MS Ch. XVI, p. 60.

58. (1) Ehrman, *Grand Strategy*, V, 193, 211–12. (2) Mountbatten *Report*, p. 29. (3) Romanus and Sunderland, *Stilmell's Command Problems*, pp. 75ff.

59. For example, Sherwood (*Roosevelt and Hopkins*, page 788) states that Churchill at the plenary meeting on the 29th "bowed to the inevitable"— *i.e.*, accepted OVERLORD—by promising Stalin that "Britain would hurl every ounce of her strength across the Channel at the Germans." Admiral Leahy in his memoirs (*I Was There*, page 209) speaks of the decision on a May OVERLORD (which he represents as a capitulation by the British, not a compromise) in the same sense—*e.g.*, the British "fell into line." See also Harrison, *Cross-Channel Attack*, pp. 125–26; Cline, *Washington Command Post: The Operations Division*, UNITED STATES ARMY IN WORLD WAR II (Washington, 1951), p. 229; Matloff, *Strategic Planning for Coalition Warfare, 1943–1944*, Ch. XIII, pp. 71–72; "The Decision to Invade Southern France," MS, pp. 8–9; Greenfield, *The Historian and Army*, p. 54; Higgins, *Winston Churchill and the Second Front*, pp. 212–13, 244.

60. Churchill, *Closing the Ring*, p. 380.

61. The additional lift was listed as follows:

LSTs	For OVERLORD	For ANVIL
LCI(L)s	23 U.S. 3 British	36 U.S. 5 British
LCTs	24 U.S.	31 U.S.
Assault transports	19 U.S. 45 British	3 U.S. 6 British

62. See CCS 428 (Rev.), 15 Dec 43, Annex V. CCS 426/ 1, 6 Dec 43, Annex V.

63. (1) CCS 428 (Rev.), 15 Dec 43, Annex V. (2) CCS 426/1, 6 Dec 43, Rpt to President and Prime Minister. (3) A summary of the Cairo-Tehran decisions prepared for the Army Service Forces on 15 December stated that Turkish intervention and surrender of Bulgaria were considered "probable," and that in this event it would be necessary "to mount such operations as may be practicable in the Eastern Mediterranean...." See Memo, Gen Wood for various addressees, 15 Dec 43, sub: SEXTANT Decisions, ASF Planning Div Folder SEXTANT Decisions.

64. Churchill, *Closing the Ring*, p. 376.

Reading 7

TARAWA: THE TESTING OF AN AMPHIBIOUS DOCTRINE

Dr. Jerold E. Brown

The most difficult of all military operations is an opposed amphibious landing. The very nature of such a landing assures high risk. Moving men and equipment across open water and unprotected beaches in the face of carefully calculated fire is an extremely dangerous proposition. Furthermore, the defender has the advantage of time and space. He is more knowledgeable of the terrain on which he is fighting, and he often has the time to prepare his defenses in considerable depth, erecting a wide variety of obstacles designed to canalize landing craft into undesirable landing sites or lethal fire zones. He can also use elaborate systems of tunnels and trenches to move reserves, redeploy forces, or respond to other crises in engaging the landing force.

The invasion force, on the other hand, is totally self-contained. It must carry every conceivable item it will need. It will serve as fire support base, commissary, evacuation hospital, communications center, recovery and maintenance depot, and command post until an adequate beachhead is secured to move those activities ashore. Moreover, the invasion commander will always have an imperfect knowledge of events and conditions ashore until the objective is taken. However skillfully he employs deception or surprise, he will eventually have to tip his hand to the defender as to when and where the attack will occur.

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Historically, therefore, amphibious operations have been attempted only rarely, and seldom have they been successful. Perhaps the only operation more difficult than landing on a hostile beach is withdrawing from one.

After the abysmal failure by the British to maintain and exploit their beachhead at Gallipoli in 1915, many military experts concluded that modern firepower had made the already difficult task of amphibious operations impossible. Therefore, European armies, as well as the U.S. Army, devoted little attention to the problem of amphibious operations after World War I. The U.S. Marine Corps, however, found itself in a serious predicament in the years following the war. During the war, the Marines had served in France with considerable distinction as regular infantry. Many Army leaders believed that this should be the continuing role for the Marines. Faced with a parsimonious Congress and the reduction of capital ships necessitated by the Washington Naval Treaty, the Navy questioned whether it could continue to maintain the Marines. What limited manpower and resources the Marines could muster were used to sustain colonial infantry in Latin American interventions. Within this milieu, the Marine Corps began to cast about for a more significant mission.

In 1921, Major Earl H. Ellis wrote a paper that offered a solution to the Marine Corps' dilemma. Ellis' paper dealt with the problem of wresting control of bases in the central Pacific in the event of war with Japan. He suggested that it might be possible, after all, to land successfully on and seize defended islands. Based on Ellis' proposals, the Marine Corps began the difficult process of developing a doctrine to accomplish this objective. Thirteen years later, after numerous exercises, both in the schoolhouse and with the fleet, the Marine Corps published the "Tentative Manual of Landing Operations," its proto-doctrine for amphibious operations.

Doctrine, however, is merely theory. No matter how soundly it is based on past experience and solid staff work, there are no guarantees that it will achieve success. Only under the rigors of combat, with all its infinite possibilities for mischance and confusion, can doctrine be thoroughly and definitively tested. Thus, nine years after the appearance of the "Tentative Manual of Landing Operations," the Marine Corps was yet to demonstrate the efficacy of its nascent amphibious doctrine.

Although Allied forces in World War II conducted several seaborne invasions in 1942, none were staged against heavily defended, open beaches. The first real opportunity to test the Marine doctrine came in November 1943 at Tarawa atoll in the Gilbert Islands. Composed of more than a dozen coral atolls 2,000 nautical miles southwest of Honolulu, the Gilberts stretch 500 nautical miles in an area of the Pacific 3 degrees north and south of the equator, between 172 and 176 degrees west longitude. The British declared the Gilberts a protectorate in 1892 and established an administrative headquarters at Tarawa. Tarawa is a typical Pacific atoll ninety miles north of the equator, a hook-shaped chain of small islands surrounding a lagoon approximately eighteen by thirteen miles in size. The westward opening to the lagoon is protected by a coral reef that lies just beneath the surface of the Pacific. The highest elevation on Tarawa is fifteen feet above sea level.

The barb in the Tarawa hook is formed by Betio Islet, less than 300 acres of hard-packed coral sand liberally sprinkled with coconut palms. The island has no distinguishing natural features and would be of little importance except that an opening through the reef into Tarawa lagoon lies at its north end. It was probably because of this access into the relative protection of the lagoon that a British trading company established a copra station on Betio at the beginning of this century. To facilitate loading copra onto ocean-going vessels, the British built a long pier on the lagoon side of the island that reached to the deep water outside the reef. The long pier was the only significant structure on Betio when a Japanese task force landed in December 1941, evicted the British manager and his staff, and constructed an airfield.

By November 1943, the Japanese had turned Betio into a substantial fortress. About 5,000 naval infantry manned an extensive system of reinforced concrete blockhouses, coconut-log bunkers (covered by 3 or 4 feet of coral sand), steel pillboxes, and carefully placed gun pits—all connected by an elaborate network of tunnels and slit trenches. A score of heavy guns in hardened revetments, including four 8-inch guns removed from the British naval base at Singapore, commanded virtually every approach to the island. Rear Admiral Keiji Shibasaki, sent to Tarawa because of his reputation as a superb tactical commander, was so confident in his defenses that he remarked that Betio could not be taken by a million men in a hundred years. He could not have been more mistaken.

The Tarawa landing was part of Operation GALVANIC, conducted by the V Amphibious Corps under the command of Holland M. ("Howling Mad") Smith. Galvanic called for the 2d Marine Division, under the command of Major General Julian C. Smith, to land at Tarawa, while the Army's 27th Infantry Division landed at Makin atoll to the north and a smaller Marine unit landed at Abemama atoll to the south. Clearly, however, Tarawa was the most important landing of the three.

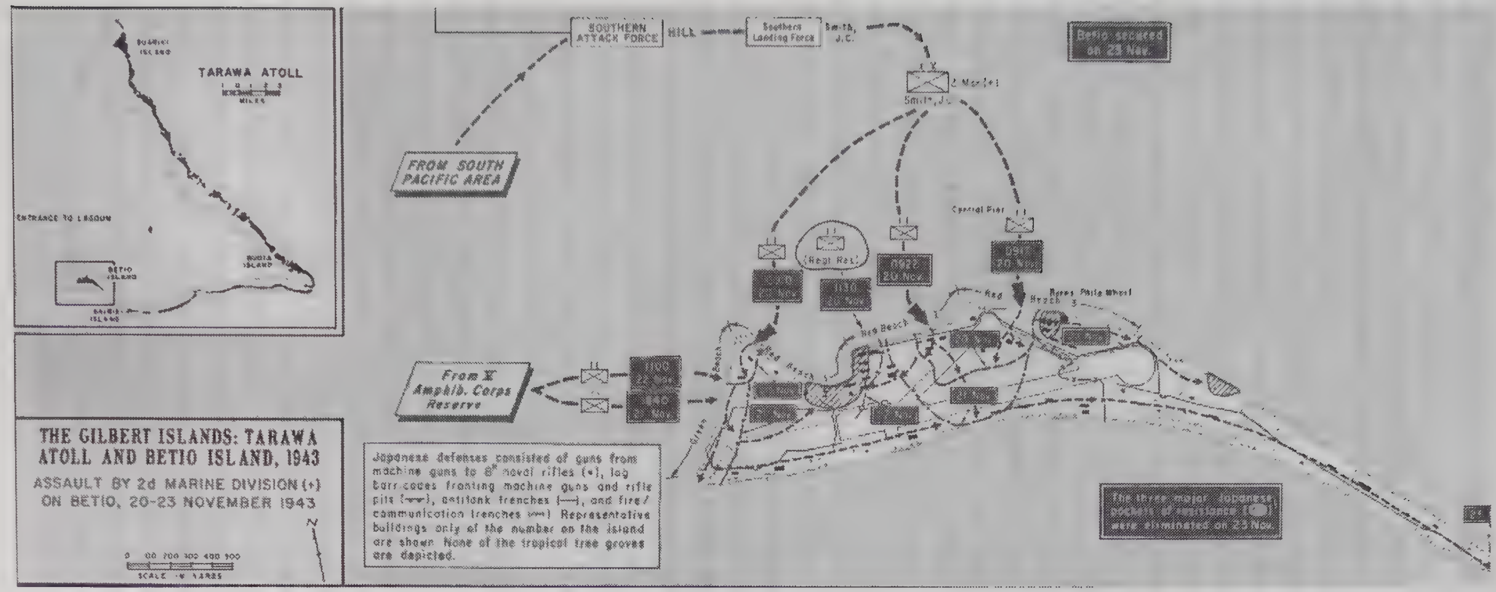
Of the many details to be worked out by the V Corps staff over the next two months, the most important were on which beach to land and when to land. Betio is like a lazy triangle lying on its side, three miles long from west to east and about three-quarters of a mile wide at the base. The south side of the triangle presented the best landing beaches. These beaches were closest to the airfield, one of the primary objectives, and were on the seaward side of the island, closer to where the invasion fleet would anchor (see map). The staff designated these landing areas Black Beach 1 and Black Beach 2. The narrow base of the triangle, designated Green Beach, lay close to the opening through the reef into the lagoon, and landing craft would not have to climb over a reef to reach this shore. Along the Black and Green Beaches, the Japanese had constructed extensive obstacles, both above and below the water line.

That portion of Betio that faced the lagoon was designated Red Beaches 1, 2, and 3. Not only did the Red Beaches offer some protection from the open sea, Smith's staff concluded that they were the least heavily defended. Furthermore, a long pier was on this side of the island, and it could play a significant role in getting men ashore. Also, a seawall of coconut logs just above the hightide line would provide some protection from small-arms fire to the men who reached it. The great disadvantage in using the Red Beaches was the precise navigation required by the small craft in carrying men and equipment ashore. Each wave of the invasion force would have to pass through the opening into the lagoon, turn to the starboard (at a predetermined point) in open water, maintain its position in formation as it approached the beach, and then mount the reef before proceeding ashore to discharge troops and cargoes at designated points. Despite these obstacles, the staff selected the Red Beaches for the landing.

The question of timing was even more problematical than that of choosing a landing beach. Doctrine called for landings at high tide. This was necessary so that the landing craft could clear as many defensive obstacles and land as far up the beach as possible. On a coral atoll, the landing craft would also have to get over the reef. The tides at Tarawa atoll are among the most capricious on earth. Without reliable charts and with little agreement among the intelligence experts, the staff struggled with the problem. Other factors, however, ultimately determined the time schedule. Washington was pressing for a quick offensive victory, and the Tarawa landing would have to coincide with the other Galvanic landings. Finally, Smith confirmed D-day as 20 November 1943. The tides would not be favorable.

The invasion force, composed of the 2d Marine Division (which had been training in New Zealand) and most of the support forces coming from Hawaii, rendezvoused on D-2. In accordance with doctrine, Navy and Marine aircraft had already flown a hundred sorties against Betio, saturating the island with bombs and strafing anything that moved. As the fleet approached Betio, its big guns worked over the island's defenses one last time, especially the area immediately behind the landing beaches. All reports indicated that nothing was left alive on Betio. Later analysis showed that about one-third of the defenders were indeed killed in the preinvasion bombardment, but that still left all too many Japanese to greet the Marines when they came ashore.

A little after 0800 on Saturday morning, 20 November, three reinforced amphibious battalions of the 2d Marine Regiment (commanded by Colonel David Shoup on board the first wave of landing craft and amphibious tractors [amtracs]) began moving toward Red Beaches 1, 2, and 3, abandoning the holding pattern they had maintained for more than four hours. Almost immediately, things went wrong. Many of the heavy guns on Betio had not been put out of action. They began to unleash a deadly hail of shrapnel and antiboat rounds into the tightly packed landing craft as they neared the reef, inflicting the first casualties on the attackers. The amtracs paused briefly as they reached the reef, then climbed over it and proceeded toward the beach.


THE GILBERT ISLANDS: TARAWA ATOLL AND BETIO ISLAND, 1943
ASSAULT BY 2d MARINE DIVISION (+) ON BETIO, 20-23 NOVEMBER 1943
0 100 200 300 400 500
SCALE IN YARDS
N
TARAWA ATOLL
MILES
BUARIKI ISLAND
BUOTA ISLAND
BETIO ISLAND
BAIRIKI ISLAND
ENTRANCE TO LAGOON
Japanese defenses consisted of guns from machine guns to 8" naval rifles (•), log barricades fronting machine guns and rifle pits (╤╤), antitank trenches (├─┤), and fire/communication trenches (〰). Representative buildings only of the number on the island are shown. None of the tropical tree groves are depicted.
FROM SOUTH PACIFIC AREA
SOUTHERN ATTACK FORCE
HILL
Southern Landing Force
Smith, J.C.
2 Mar Div (+)
Smith, J.C.
From V Amphib. Corps Reserve
1100 22 Nov
(Regt Res)
1130 20 Nov
0922 20 Nov
Central Pier
Red Beach
Red Beach 3
Burns Philp Wharf
Green Beach
Betio secured on 23 Nov.
The three major Japanese pockets of resistance were eliminated on 23 Nov.

Betio Islet

The Higgins boats, however, with a draft of about 4 feet, could not get over the reef, and they began discharging their cargoes into the water about 600 yards out. Blistering machine-gun and small-arms fire reached out to meet the Marines, who were unable to return fire as they waded toward shore laden with arms, ammo, and equipment. The majority of Marines who died on Tarawa did so as they struggled to reach shore.

Once ashore, confusion persisted. Many of the companies did not land at their designated points or found themselves inextricably mingled with other units. One of the three battalion commanders was killed within a few minutes of hitting the beach, and another panicked under the severe fire and told his amtrac driver to withdraw toward open water. The seawall, behind which many Marines initially found some cover from enemy small-arms fire and where the Navy corpsmen had set up aid stations, turned out to be a mixed blessing. The amtracs and tanks that had come ashore were now penned between the beach and the water, and Japanese fire destroyed or disabled a large number of them. Thus, the second wave that was to come ashore was delayed, leaving the men who first reached the beach to struggle on their own. By late afternoon, the battle had deteriorated into a series of small unit fights all along the beach. Penetration by the invasion force was limited to no more than a few hundred yards in most places, and numerous Japanese strongpoints continued to inflict heavy losses on the Marines. Colonel Shoup, wounded himself, directed the fight from a makeshift command post and aid station.

The first night was the hardest time for the men on the beach. Constantly threatened with counterattacks, snipers, and infiltrators, they got little or no sleep. Furthermore, many Marines had long since drained their canteens and emptied their cartridge belts. No more supplies would come ashore until morning. The wounded suffered greatly. Those that lay in the aid stations on the beach could only wait for morning and evacuation; the uncollected wounded could only hope that their buddies got to them before the enemy did.

Sunday morning, D+1, saw little improvement in the Marines' situation. The 1st Battalion, 8th Marines, landing on Red Beach 2 a little after 0630, drew withering fire from almost as many enemy guns as the troops experienced the previous morning, and once again, the landing troops suffered heavy casualties in the water. Stiff resistance continued throughout the day, and the Marines had to destroy each Japanese strongpoint at a heavy price. Basic infantry weapons, grenades, flamethrowers, and explosive charges were the tools necessary for this task. Meanwhile, Navy destroyers cruised back and forth outside the reef providing fire support with their 5-inch guns. But with less than fifty yards in some cases between their positions and the Japanese, the Marines were reluctant to call for fire except when they had no alternative. Sunday ended with more of Betio in Marine hands, but the island was not yet secure, and the Marines prepared for another tense, sleepless night.

As the third morning dawned, the Marines found their position considerably improved. In the first place, the incoming tide now lifted the Higgins boats over the reef for the first time and allowed them to reach the beach before dropping their bow ramps. At midmorning, the Marines began their final assault on the big reinforced concrete structure housing Admiral Shibasaki's command post. Finally reaching the top of the building, they poured gasoline down one of the air vents and threw a match in after it. Thus ended Shibasaki's command and, seemingly, the will of many Tarawa defenders to continue resisting. Large numbers of Japanese began to take their own lives, and the Marines cleared much of the western portion of the island, pushing the remaining enemy into the narrow tail of land to the east by late evening. The battle for Betio was won, but it was not over.

The final act on Tarawa atoll was a series of nerve-racking banzai attacks that began just after dark on the third night. In each case, a mob of enemy charged the Marines' position with swords and bayonets. They came in a frenzy, seeking the final approval of their emperor by their glorious death. They were met by artillery, machine-gun fire, and tired Marines with bayonets who, in many cases, were also out of ammunition. The last attack came about 0400 on Tuesday morning—just seventy-two hours after the first Marines had begun loading into their landing craft.

Military experts and historians have long debated the strategic importance of Tarawa. Some have argued that wresting Tarawa from the Japanese was both unnecessary and too costly—1,027 Marine and Navy dead, 88 missing, and 2,292 wounded. Although the Japanese had a land-based air capability in the Gilberts, so the argument goes, they could not reach any major U.S. bases nor could they appreciably interdict shipping in the central or South Pacific. Furthermore, the critics maintain, the loss of life on Betio was not at all justified since the airfield was never used to support subsequent operations in the advance across the Pacific.

These arguments overlook two essential points. Although the airfield on Betio did not play a further role in America's war effort, one should not underestimate the importance land-based aviation held in the early years of World War II. As late as 1943, most military strategists believed that only land-based air forces could adequately support offensive operations. The fighting in the Solomons and New Guinea a year earlier had seemed to confirm that view. The fast carrier task force, with the ability to provide offensive support as well as fleet security, was then only in an early stage of development. Its future was still uncertain, although its proponents were already proselytizing among the skeptical. All this considered, the airfield on Betio was a legitimate military objective in November 1943.

Finally, one must consider the role of Marine Corps amphibious doctrine in Operation Galvanic. Until the Marines landed on Betio, amphibious doctrine was just theory. The Marines believed that they could land on a hostile beach and take their objective, but they had not yet proved that it could be done The only way the Marines could prove the validity of their doctrine was to conduct an actual amphibious landing under fire and succeed. They did that at Tarawa.

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Reading 8

"YOUR MISSION IS TO CONTACT THE RUSSIANS"

Captain Bill Knowlton

One of the most fantastic episodes of the whole war occurred shortly before V-E Day when a young lieutenant of the Seventh Armored Division was ordered to advance with his reconnaissance troop beyond the American lines to find the Russians. This 24-year-old West Pointer never guessed that, with fewer than 100 men, he would have to bluff his way over 60 miles through the whole German 12th Army.

Cut of from communication with his headquarters, plunging forward because he dared not admit his weakness by turning back, Captain Knowlton achieved the disarming of thousands of German troops and the surrender of several German towns.

His breezy narrative, written in a letter to his wife and not intended for publication, is packed with drama, suspense and a sense of high adventure, and is spiced with humor typically American. The climax comes with his vociferous and convivial meeting with our Russian allies.

It was while I was running prisoner escort, and had just sent my platoons way back out of radio contact, that Sully[1] got through to me. "Hey, Bill," he

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Reprinted with permission from "Your Mission Is to Contact the Russians," *Reader's Digest* (August 1945), 116-128.

[1] Knowlton's fellow officers on this expedition were: Lieut. William Sullivan (Sully), Lieut. Earl Harrell, Lieut. Harry Clark and Lieut. Henry Temple.

said, Headquarters has been trying to raise you. Get down to Ludwigslust immediately—they have another mission for us." I swore to myself. We had been on the move all night crossing the Elbe through wind and stinging rain blowing down from the Baltic, and then since dawn had been on a reconnaissance mission ahead of the task force which had just taken Ludwigslust on the plains northwest of Berlin. I made arrangements for all platoons to drop what they were doing and get down to Ludwigslust immediately. I opened up the siren on my armored car, put the accelerator to the floor; and went down the road doing 45. That order to proceed to Ludwigslust was to prove to be the key point in my career.

Ludwigslust was a seething mass of captured Germans in uniform. I finally managed to find our Division Headquarters.

"Knowlton," the Colonel said, "Ludwigslust is as far as we are allowed to go and our troops are drawn up along a north-south line just outside the town.

"I want you to take your troops and contact the Russians. They are somewhere to the east between 50 and 100 miles, according to rumor. Get someone from their staff and bring him here.

"The German 12th Army lies between you and the Russians," he continued. "If you get in trouble we can send you no help. Do not get too entangled, and let me know your progress. Good luck to you."

He shook my hand, which both touched me and made me a trifle apprehensive. You shake hands with people you don't expect to see again for a long, long, time, and I didn't like it.

To make speed, I decided to leave my assault guns behind. Harrell's platoon was of on another mission, so I started with only two platoons, less one section, and three headquarters armored cars. I put Clark's car in front, a mess of peeps,[2] my car, a few peeps, Sully, and then the rest of the first and third platoons. Altogether we were about 65 men.

I looked at the map. I could snoop along the back roads and take my chances fighting, or I could barrel right down the main road as though an army was following me and hope no one would shoot. I decided to barrel down the main road, and so we started off.

This was the mission of the war, and my heart was singing as we swung out onto the road. But my heart was pounding a little, too, for this could be a nasty mess, as we found out later.

We soon passed through the American lines. The road beyond was jammed with German troops retreating to the American zone. They were mostly drunk, and upon seeing us they would shout and throw down their weapons. That gave us the keynote for the situation and we went faster. The crowd started thinning out, and soon we were hitting open stretches before sighting the next group. Each time there would be a tense moment. The Heinies would aim their guns, then stop, puzzled as to why we stayed seated up on top of the turrets and made no move for our guns, and finally they would decide that we must be a helluva big force to behave that way, and throw down their weapons.

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[2] "Peep" was the soldiers' nickname for a jeep.

After traveling ten kilometers we reached Neustadt. The streets were jammed with civilians and soldiers, just as though it was a holiday. The crowds were singing and everybody was very jolly. The soldiers laughed and waved when they saw us, and held up *Panzerfausts* for us to see, then threw them away. It was contagious. As soon as one soldier threw away his weapon, everybody did.

It took us almost two hours to go through Neustadt, and we finally resorted to directing traffic ourselves. I got hold of a German SS[3] Lieutenant, and had him organize a traffic force from the SS troops in town. It was worth the price of admission to see the faces of the German soldiers as they drove into town to find SS and Americans directing traffic side by side. We had a circus.

On the other side of town was a thick pine forest through which the road ran. We were held up by a snarl of broken-down trucks, over which soldiers were clambering in search of food and clothes. I began to get a little worried. Several SS came out of the woods, got food, and then went back. I could see their machine guns, and they looked like a hard bunch, but I called to them to come back out of the woods. They stopped and looked around startled, and then ran for their machine guns. I thought we were done for, but I didn't want to fire and bring the whole crowd down on our necks. So we all stayed seated and continued to yell at the SS as though it was inconceivable to us that someone should want to resist the large force that was moving us. They came out and gave up their arms.

There were so many weapons, that we couldn't possibly break them all. So we finally took the pistols, and told the men to go back 15 kilometers in that direction and turn in all weapons to the Americans there. I promised them that the huge force following us would not fire on them; in fact, I said, they would probably be so well camouflaged that the Germans would not see any of them until they reached the rear areas at Ludwigslust. I lied more in that day than I ever have in all my life.

We reached the end of the forest and started across an open space. My heart sank as I happened to glance to the side. On our flank, about 1000 yards away, was a battery of four of the hugest anti-tank guns I have ever seen. I realized that the others had not seen them, so I stayed seated on the turret and acted as though everything was all right. The four guns swung onto our column, started tracking us as we moved. My throat went dry, and my stomach, already tight from the cold, tightened more. I think I must have prayed, but I can't remember a thing except those guns tracking us. Suddenly they stopped, and four heads came up over the parapet. These krauts looked for a while, and we paid no attention to them. A few more heads came up and finally about 45 men came out from the position, throwing their rifles away as they did.

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[3] The SS, or Schutz-Staffel, an elite corps.

The whole trip continued like that. We would come on a group of Germans, they would aim, we would yell at them to throw down their arms, they would comply and off we would go. We ran across a lot of tanks—Tigers, Panthers—and assault guns, all complete with crews. After sweating out so many of those damn tanks during the Ruhr pocket; it was like being behind stage at the theater to see those Germans running them. We took the firing pins out and sent them on their way.

It was really something to see Germans throwing away their arms by the thousands—by regiments and battalions. Once a kraut Colonel came up the column, stared insolently at me, and ordered all the soldiers to stop throwing away their weapons. One soldier had a bazooka in his arms to throw away, but when the Colonel yelled at him he stopped and looked inquiringly at me several other soldiers stopped and watched. It was quite tense. I jumped out of the vehicle, walked up to the Colonel, put my hand in his face and pushed hard. Then I turned to the soldier with the bazooka and told him to throw it away. He still hesitated, so I yelled at him in a harsh tone of voice. He grinned and threw the bazooka away. I turned back to the Colonel and chewed him out thoroughly, Asking him who he thought was running his regiment—he or I.

Parchim was the damndest town I have ever seen. Someone had telephoned ahead that the American Army was coming; so when my little force pulled into town, there were two German MPs on each corner to direct us through. The route was posted for us, and SS kept the crowds on the sidewalks and off the streets. German soldiers lined the road six deep all the way through the city—all cheering loudly. Someone had given them the impression that we were going to fight the Russians.

Finally we came into Lubz, and right there I got as scared as I have ever been in my life. We had just tried to get headquarters on the radio and discovered we were out of contact. So here we were 40 miles inside enemy lines with about 65 men, in the center of the German 12th Army, and with no prospect of getting out alive if they decided we were not to leave. And here in Lubz we encountered some of the real fighting men of the Wehrmacht, with many SS among them. They sat on mammoth tanks and field-artillery pieces, their faces were; grim and dirty and bearded, and they kept their guns leveled on us. They were a tough collection and they did not like us.

Ahead of me was a huge general, riding in a staff car with a motorcycle escort of SS troopers. I had to do something or else we were kaput. I pulled my armored car over in front of his auto, and casually leaned out, pushing one of the SS machine pistols aside. "*Wo gehen Sie, Herr General*?" I asked.

He turned a raging purple face on me for daring to block. "I can't understand you," he said. "Get out of my way."

"Where are you going, chum?" I said. "I'll get out of your way when I find where you are going."

"I am going to Parchim," he screamed.

"OK," I said. "Just so I know where you are. Driver, pull out of the General's way." We eased over, and the General tore off in a cloud of dust and SS troopers. He turned out to be the corps commander of that sector, but more about that later.

I was feeling pretty good about that time, and I almost died laughing when I saw Sully. He came up from behind on a German MP who was feverishly trying to direct traffic east. Sully tapped him on the shoulder, and the MP looked around to tell him to wait a minute. It was a perfect double take. The MP turned back, started to direct traffic, realized that it was not a German, and turned back with his chin dropping to his chest. Sully placed a hand on each shoulder, spun him around, and started him directing traffic from the east to the west.

A few minutes later Harrell caught up with us. Then an SS came to me and demanded to know what the Americans were doing here. I told him we were heading a large force, and asked where the Russians were. He told me they were 50 kilometers away. So we had chased 50 kilometers through enemy territory to reach Lubz, and here we were still a hell of a long-distance from the Russians.

I tried to reach headquarters again on the radio, but still no luck. By now the SS were crowding around the car and their attitude was definitely hostile. Any more indecision on our part would result in trouble.

There were several courses open. We could go on and meet the Russians, but it was getting dark, and the problem of identifying ourselves came up. The signal was a certain type of flare, of which we had none, and at night they could not see our emblems. Also, as we approached the German-Russian lines we could expect fire from the Germans. We could turn around and go back, but if we ever showed enough indecision to turn around we were all dead men. That was written in the SS men's eyes. Last of all, we could stay in Lubz and sweat it out all night.

More and more and bigger and bigger artillery pieces were going by, tanks were filling the night air with the noise of clashing steel, German officers were screaming harsh commands—it was one of the most magnificent and yet terrifying sights I have ever seen.

I made my decision. "Sully," I called, "take the troop out of town on top of a hill and see if you can regain radio contact. Sergeant Ladd, come with me." So the troop pulled on, and Sergeant Ladd and I started to elbow our way through the German troops.

As we reached the center of town, a Major with a huge potbelly came stumbling down the street with a meek little civilian beside him. "I surrender the town," he sputtered. "The General is not here, so in the name of the General I surrender."

"I know," I replied. "I just talked to the General. He went to Parchim."

"Oh, good," said the Major. "You talked with General Hernlein, then. I surrender the town. This man here is the Burgermeister."

The Burgermeister mumbled something about a pleasure to see the American Army (meaning Sergeant Ladd and myself) and doffed his hat.

I brushed him aside and spoke to the Major brusquely. I was so tired that I could not see straight, but I tried to sound tough and business like. "First, I want a Command Post."

"Right over here" said the Major, "the SS have a Traffic Control Point. It was also a Division CP until the Generals left.

"Run the SS out and I will use it," I ordered, and so we started through the town, with people leaning out of windows staring and soldiers pushing up to see the new military commandant. I looked neither to the right nor left, but strode down the street with the Major and Burgermeister puffing along behind.

The CP, a former bar, was full of SS and parachute officers. I spotted a Colonel sitting at a huge table with a map on it. "I'll sit there," I said; and the Colonel reluctantly vacated the chair. The other officers stood watching me with steely eyes.

I had to move quickly to continue the bluff. I ordered all civilians off the streets to their homes. German soldiers could pass through the town but must leave their arms there. I arranged with the Burgermeister to turn over the brewery as an arms collection point.

The Parachute Division Hermann Goering, one of the crack divisions of the German army, was in town; so I organized them as MPs and told them they were to keep traffic moving, to see that all traffic passed by the arms collecting points, and that all troops turned in their arms. They got hot and in about an hour traffic was flowing smoothly. I permitted them to keep all large tanks, as there were many soldiers riding on these pieces, and I wanted to get as many as possible back to our lines.

I was really sweating by then. My radio operator came in and said, "Sir, I put that message in for you and here's the answer." I opened his note and read: "*Sir, I cannot contact any station—we are cut off from any friendly forces.*"

"Thank you, Sergeant," I said. "Notify them that I will comply and stay here awaiting further orders." He saluted and left.

I turned to the Germans. "I have just received word from my headquarters that I will remain here for the night and move forward in the morning to meet the Russians."

They screamed bloody murder, wanting to know why I didn't move forward that night. I took a little of that and then got mad, told them that we were soldiers, and if our general told us to stay there that night we would stay.

All our vehicles came back into town and parked in the main square. I arranged for two platoons to stay with me in the CP, living upstairs in a hall. The Germans complained that it was an SS billet, but I ran the SS out and moved in.

So far the day had been the biggest piece of deceit in history. The bluff was working only because they thought I was the whole American Army, and because they thought that when I met the Russians there would be a line of demarcation. I knew that if I got in trouble no one could come and help me. I knew that this territory would be Russian after the war.

I was hardly settled when the phone rang. It was the German Major in charge of Parchim. "Herr Kommandant," he asked, "when are the other Americans coming?"

"Oh," I answered, sweating like a pig, "they will be there very shortly. Many tanks and infantry. If they don't get there tonight, they will in the morning."

The Major sounded a little worried. "Have you any instructions for me?" he asked.

I saw my chance to double the magnitude of his job. "Yes," I said, "you will collect the arms from all troops and turn them all over to the Americans when they arrive."

He screamed like a wounded eagle. "I don't give a damn what you think," I yelled. "I am military commandant and I order you to disarm everybody." A brilliant thought hit me. "And don't forget that Corps Headquarters out there with General Hernlein." And I hung up.

A captain from the Hermann Goering Division arrived. He stated that his General did not believe there were American troops in Lubz, and wanted a cigarette as proof; I'd be damned if I was going to give any Heinie an American cigarette, so I wrote a note as follows:

> *This is to certify that American troops have this date captured Lubz, Germany. William A. Knowlton, 1st Lt., Cavalry, Commandant.*

With this note I enclosed a piece of chewing gum.

A Captain from the Panzer Marine Brigade came in. He was big and nasty. He spoke English very well and started giving me a hard time. He was defending on a line farther east, and insisted that I go out and meet the Russians immediately. I told him I'd go out when I was ready, and that I was not sending any of my people out in the night for him or; anyone else. He tried to browbeat me into telling him my orders, and how many troops I had, and every few minutes that telephone would ring and a voice would say, "Herr Kommandant, the American troops are not yet here in Parchim."

"They will be there," I would say, the sweat oozing from my brow.

Here is the setting and a cross section of conversation in that CP:

> As the lights go up we find a battered beer joint, filled with young strong German soldiers. Upstage is a huge desk, a picture of Adolf Hitler behind it, at which our worried leading character is sitting. The only light is almost a spotlight shining directly on the desk, making it seem like a third-degree setup. His dirty combat jacket is ripped and tattered by shrapnel, his face is filthy, and a two-day stubble grows on it. As the curtain opens the Panzer Marine Brigade captain is speaking. He pounds his fist on the table.

Panzer Capt.: You must go out and meet the Russians tonight. They are advancing here in this room (from German word Raum, meaning space) and you must meet them. They are here or here. (Pounding map for emphasis.) You must go out tonight.

Knowlton: Don't tell me what to do.

My orders are to stay here and meet them here.

PZ Capt.: You are not in communication with your headquarters.

Knowlton: Certainly I am, but my orders are to stay here.

Engineer: Herr Kommmandant, the General just had me lay a mine field outside the town here. May I go to my company now with my detail?

Knowlton: No, get out there and take up the field again. Here is a pass so the other American troops will not stop you. (Troops being nonexistent.)

Engineer: But the General ordered me to-

Knowlton: Get out and take up that field.

PZ Capt.: The Russian will not advance tonight, because he will be sleeping with our beautiful German girls. Our lovely girls will be raped.

Knowlton: Propaganda!

German Cpl.: Herr Oberleutnant, these men wish to check the bulb above you for to the electric go make. (Telephone rings.)

Knowlton (To telephone): They are coming now. (To Captain) I will not go anywhere tonight. (To workmen) Get your dirty feet off my neck!

German Cpl.: Sir, I beg your pardon, but the Burgermeister wishes to know if he can go home to bed.

PZ Capt.: You will see when you are fighting on the banks of the Polish rivers—when the Russian has finished sleeping with our beautiful German girls You must go out tonight.

> GI (entering with struggling SS man): Sir, this lousy bastard tried to drill me—
>
> SS man: Dieses verdamnte amerikanische Schwein—(telephone rings.)
>
> Telephone: Herr Kommandant, the American troops are not yet in Parchim and the Herr General has ordered all troops to take up arms and return to the front. What shall I do? When are the other Americans coming?
>
> GI: Shuddup, you kraut, or I'll knock your teeth out.
>
> German Major: Herr Kommandant, the brewery is now full of arms. Where are the soldiers to turn in their arms now? (A few rounds of Russian artillery fall outside.)
>
> PZ Capt.: See there. Here come the Russians! You must go out and meet them here—in this room. You must get your men up.
>
> Knowlton: Yes, he can go home now. Yes, the troops will he there soon. Find another factory for the arms—I don't care where. Get your feet off my neck, you kraut bastard. Get that Burgermeister out of here—he makes me nervous Which direction is that artillery, coming from? No, I will not go out tonight with any patrol. Etc. etc. etc.

This went on for hours until I was worn out. Remember that I had not slept for two nights and days. The final blow came when this arrogant Panzer Captain leaned over the desk, rapped on the map, and said, "I think you are bluffing. First, I think you are no longer in communication with your headquarters; and second, I think there are no American troops nearer here than Ludwigslust, and that no more are coming." Dead silence fell over the room-hard, hard eyes stared right through me. In that silence, the outside sounds suddenly became louder. I heard the clashing of tank trucks, the sputter of trucks, the songs of the SS carrying clear in the cold, bitter wind, the crack, crack of hobnailed boots, the loud commands of German officers.

My spirits fell. "Knowlton," I thought, "you were a damn fool to think you could ever get away with it. Right above you sleep 60 men who trust you, and you have led them into a deathtrap. This is your last bluff, and it had better work. You used to claim you were an actor. This is your last chance, son."

So I squared my shoulders and stared at the crowd. "Don't be stupid. Do you think I'd be dumb enough to come way in here, take over three cities, and disarm several hundred thousand German soldiers unless there was a large force following me?"

The Captain stopped, scratched his head. "No," he answered, "I guess not."

"Now I'm going to bed. I'm dead tired."

There were loud protests. Everyone screamed that the Russians would attack during the night.

"I don't give a damn," I said. I don't care who comes unless I get some sleep. Good night!"

The entire room clicked their heels and gave the Hitler salute: "*Gute Nacht, Herr Kommandant.*"

The next morning I went downstairs and things were critical. The German High Command had discovered that I was the only American force this side of Ludwigslust, that we had disarmed, by SS count, 275,000 German troops, and that the whole German Army were laying down their arms in Lubz. Orders were issued for them to take up their arms again, and shoot us if we resisted.

I had a half-hour argument with an SS Colonel from the corps staff. We agreed that all troops going west would lay down their arms, while those going east could keep theirs. He made that agreement because he was too proud to admit that there were any German troops retreating from the east. So he went away—his honor satisfied—and my boys continued to do a land-office business at the arms-collecting points, of which we now had several.

Soon, however, several fistfights broke out between my boys and the SS. Only the guts of certain of my boys kept things from getting out of control. But it could not last much longer. The only solution was to get out on patrol, so we could save our face and still avoid the ultimate shooting match.

I got my armored car ready and had Harry Clark's platoon follow me. Before I started I got two officers from a German engineer outfit and put one over each front wheel of my car. "Now, gentlemen," I pointed out, "if my car hits a mine, you will be just as dead, or slightly more so than anyone in the car." We started down the main road to Plau—my two officers sitting on the front like two bird dogs, just scanning hell out of the road for mines. Best mine-detectors I ever saw.

The country in this area is rolling, and as we neared Plau we could see for great distances—so also could anyone on the other side see us. I could hear the sound of firing in the distance ahead, and began to worry about the problem of mutual recognition. We had been assured that the Russian tanks would all have white triangles and that they had been oriented on our markings. But at the distance from which someone could shoot at us our markings were not too legible.

As we neared a small town, one of the German engineers suddenly shouted, "There is our German artillery!"

Traveling along the skyline from east to west was the longest column of horses, horse-drawn wagons, and marching men I have ever seen. I grabbed the field glasses, took a look, and handed the glasses to the German. "Look again, Herr Hauptmann," I told him, "and then tell me for how long the German army has had Cossacks in high fur caps riding the column!"

Well, we had gotten that far—now the question was how to make the historic junction without getting a lot of people killed. I called up a peep, climbed on the front of the radiator with a big white flag, and started down to the town. As we rounded a corner there was a Russian Major, looking at a map. I leaped off the peep, clicked my heels and saluted, yelled "*Ya Amerikaneetz Oberlitnant*," and shook hands with him.

Thus at 0925, 3 May 1945, was junction made between the American and Russian forces north of Berlin. It was the first contact on the other side of the Elbe.

I radioed Harry to bring the rest of the vehicles down, and then the Major guided us through his troops to the colonel. The Russian army is unique. I expected a military machine, manned by stern-visaged men, with a lot of mechanical equipment. What we found was a conglomeration of horses, German trucks, bicycles, civilian wagons, rusty old field pieces, Cossacks, tommy guns, motorcycles. There seemed to be no system, and people just wandered in and out of the column at will with apparently no orders or particular jobs. Every other man was an officer. Everybody grinned, saluted us, and yelled some unintelligible gibberish—while we grinned, saluted, yelled, saluted, waved, saluted and grinned.

Finally we caught up with the Colonel. I expected a big Russian with medals hanging on his chest and a tommy gun in one hand. What I found was a farmer-like individual, serenely driving a two-horse wagon as though it were Sunday in Central Park. Sitting beside him was a girl in uniform. I later learned that she was a Russian nurse named Maria.

When the Colonel learned who I was and from where I came, he got out and pranced around, all grins. We shook hands and slapped each other on the back. I soon found out that the way to make an impression on a Russian is to run up, hit him a clout on the back that would fell an ordinary man, grasp his hand as tight a grip as possible, embrace him, grin like a hyena, and yell loudly "*Tovarish*" or "*Ya Amerikaneetz*!"

Maria came flying out and we smooched her and slapped her back. She was built like a small ox, very close to the ground, and with a 44 bust. While everybody was hitting everybody else on the back and jabbering, the Colonel got out his Russian map, which looked like Chinese to me, and I got out my map, and between us we figured out which route I had come. He expressed great wonder that I had been able to pierce the German lines and somehow get behind his Task Force so that we came up on them from the rear. It's a good thing we did. The Russians had no white triangles on their vehicles, and they all stared at our saying, "Oh, look, comrade—the Americaneetz have a star on their cars."

The Colonel got out a red pencil and we signed each other's maps, marking the place where we met. Then I got out the bottle of Three Star

Hennessey I had brought for a gift and handed it to him. He in turn handed it over to Maria and we all grinned at each other.

I had no one with me who could speak Russian, but I had a kid who could speak Polish. So the Colonel sent for a Polish-speaking officer—a very young Major—who finally came wandering up. The conversation had been a little bit sorry until then, but once this Pole appeared things livened up a little. We batted the breeze a while longer through him while millions of Russians climbed all over my armored cars, trying the guns, talking to each other on the radios, opening and closing the hatches and generally acting like the eighth grade on a visit to the military exposition. Every now and then one would let go a burst with a tommy gun, or with one of my machine guns, which would narrowly miss killing the whole staff—at which everybody would laugh uproariously and hit each other another clout on the back.

Then the Colonel sent word to the division commander what had happened. The division commander sent back word that he would be right up for lunch, and to pick out a good C.P. So the Colonel selected a good C.P. and Harry and I, with about ten Russian Majors and Captains, and Maria, repaired to the C.P. for lunch.

I wish Military Government could have seen the Russians take over a new C.P. The Colonel looked around at the neighboring houses, picked out the nicest, and said "I'll take that." Immediately several Cossacks galloped up to the house, hurtled off their horses, and strode into the house. There were several crashing; sounds; I heard some glass break, a few splintering noises of wood, probably doors one loud crash, a scream—and then the door opened and two aged Germans came flying out, evidently propelled by a large Russian boot. They had no sooner lit than a Cossack appeared at the door carrying a German boy by the seat and neck. He cleared the hedge with that one. There were more noises of doors smashing and glass breaking. In this manner was the new C.P. taken over.

When we arrived in the living room all the preserved fruit from the house was on the table. Pretty soon two good-looking Russian girls came in, carrying a platter of fried eggs and other edibles. I thought they were camp followers of some sort, but found out that one was a corporal in the infantry and the other a captain in the cavalry.

The Colonel strode in and seemed satisfied with what he found. He took my bottle of Three-Star Hennessey plus a bottle which Clark had donated, and poured us all a water-glass full. I was looking at the thing speculatively when suddenly all the staff arose to their feet, and the Colonel said in booming tones, raising his glass on high—"*Trrrroooman, Staaleeen, Churchillll.*" Whereupon everyone clinked glasses with everyone else!

Then they drank. I say "they" drank advisedly, because every Russian there gulped a water glass of cognac in one swallow. Clark and I took a good, healthy swig—and my throat burned for several minutes. The Russians all roared with laughter and belted each other, and gave us to understand that Americans were namby-pamby by race because we could not take a little slug of cognac.

Ghosts of the Wild West heroes smirked at us and I could see that the prestige of the American frontier days depended on us. So Harry and I rose to our feet and took the whole glass at one gulp; and then collapsed, our eyes watering, trying to look as though that was what we had been going to do all the time, so there.

The next thing we knew there was a water glass of vodka at each place, and all the Russians were standing. We rose swiftly, if a little unsteadily, and the Colonel proposed, "*Ameerrika, Roooossia, Ingelant*—" and we went into the bell-ringer act again. This business continued every time a new officer came into the room, until I was high as a kite.

At one point we gave the Colonel a pack of cigarettes—and thereby learned something about why so many millions of Germans were fleeing the Russians. He fumbled in his pocket, but could not find any Russian cigarettes to give us in return. Obviously international good will was hanging in the balance; so he summoned a Russian corporal and whispered in his ear. The corporal gathered a detail of several men and left. Two minutes later I heard a commotion outside and then in walked the corporal with eight packs of German cigarettes and gave them to the Colonel, who in turn presented them to us with a great flourish. "German," he said, "but good."

Pretty soon the division commander came in. He was a man of a great deal of intelligence, and we had quite a conversation. I explained to him that I had been sent by my General to bring a member of his staff back to American, headquarters. He said that he would go with me.

I then explained that there were many Germans still with arms between us and the American lines. He became quite annoyed that I had not disarmed every German between the Elbe and the Baltic; while I explained that I had only 100 men. He accepted my explanation, making a few comments on how much harder the Russians had to fight for their prisoners. I told him that we too had had a few battles since Normandy.

This division commander finally told me to tell my General to meet him in the church at Lubz. I was to go back to Ludwigslust with this message, taking with me the Polish speaking Major, who was still busily proposing toasts. During our lunch ceremony the war had been stopped. Now it started all over again. I used to wonder how the Russians could hold all that liquor. I found out the answer; they don't. I watched the task force commander issue his attack order. He reeled out of the house to the field where his officers were assembled, all alert and with notebooks poised. He stood there for a minute, held up the map—back to the officers, so that no one could see it—and then; started mumbling something about "we go from here to thish plashe and then we go to thish plashe," all the time pointing to the map which no one could see. I can't understand much Russian, but I got as much out of that order as anyone there.

He went on with this mumbo jumbo for a while, until the officers looked at each other with that “the old-man-is-drunk-again” look, folded up their books, and yelled the Russian for ‘Hey, gang—the bastards are over that way. Let’s go!” So several thousand happy-go-lucky Russians shot into the air and at each other, and the weird column started weaving down the road.

On the way back to Lubz I happened to glance around—and almost fell out of the turret. Sticking out of the assistant gunner’s seat on Clark’s armored car, looking like a jack-in-the-box was our drunken Russian major. He had a towel over one arm, a huge razor in his hand, and was laughing uproariously while trying to shave the gunner.

We finally got back to Lubz, and maybe I didn’t sweat going through the German lines again. I kept thinking of that Panzer Marine Captain and his anti-tank gun. But Russian tank columns had already taken Neustadt. There a Russian Captain sidetracked me and made me drink and share a chicken with him, while he alternately hit and kicked an SS Major he had in his car with him. Later I got back to Ludwigslust and reported that my mission had been completed.

As an additional note, the next afternoon I was called to General Gavin’s CP, and in a ceremony there the Silver Star was pinned on me by the General. I feel especially proud of that, because it came from another division than my own. I wear the medal but B Troop won it, and I wear it for them.

Reading 9

WHY THE ALLIES WON

Richard Overy

> *"There has been no instance yet in the history of wars of the enemy jumping into the abyss of himself. To win a war one must lead the enemy to the abyss and push him in to it."*
>
> —Joseph Stalin, Order of the Day,
> 23 February 1944

As Allied Armies closed in for the kill in the spring of 1945, and German leaders urged their battered forces to stand and die like heroes, Hitler took time to reflect on why he had lost the war. His remarks were faithfully recorded by his indispensable secretary, Martin Bormann, who followed his leader with pad and pencil so that posterity would be denied none of Hitler's prophetic wisdom. There they sat as Germany crumbled around them, the thick-set, boorish stenographer, a dull sounding-board for his master, and Hitler, isolated, physically broken, consumed with hatred and self-pity, but clear-headed enough to look back over his years as warlord to see where he went wrong.

Reprinted with permission from *Why the Allies Won* by Richard Overy (W. W. Norton & Company, 1996), 314-325.

The start of his troubles Hitler traced back to the Munich crisis of 1938. He regretted his failure to keep his nerve and conquer Czechoslovakia in defiance of Britain and France. He was convinced that had he done so the west would have backed away, German domination of the Continent would have become fact, and the great war to the east could have been postponed until Germany was thoroughly prepared. He regretted his friendship with Mussolini: 'anything would have been better than having [Italians] as comrades in arms . . .' [1] Italy drew Hitler into the Mediterranean and the Balkans, when the Soviet Union was the priority. Looking back, Hitler realised that he should have attacked Stalin in May 1941, and won an extra five weeks of dry weather. Better still, he should not have fought a two-front war against Britain and the Soviet Union. He was forced to attack the Soviet Union because Britain's 'stupid chiefs' refused to make a sensible peace: perhaps, he reflected, he should have struck south, seized Gibraltar and swept into the Near East to smash British resistance. But then, standing in the wings was Stalin, just waiting for the moment to strike.[2]

The remarkable thing about Hitler's reflections was how little blame attached to him. At every move it was other people, other forces, that compelled him to act. 'I, perhaps better than anyone else, can well imagine the torments suffered by Napoleon,' Hitler told Bormann towards the end of the dictated testament, 'longing, as he was, for the triumph of peace and yet compelled to continue waging war, without ceasing . . . '[3] Munich was the fault of Neville Chamberlain who 'really intended to wage ruthless war against us'; Hitler was let down by Mussolini, frustrated by Stalin, served by a German elite composed of feeble 'petty bourgeois reactionaries'. Above all German defeat was the work of the Jews, a refrain that echoes through Bormann's jotted notes. The war, Hitler believed, was 'typically . . . and exclusively Jewish'. It was sustained by the 'most powerful bastion' of world Jewry, the United States, whose President, 'the elect of the Jews', worked tirelessly, in Hitler's view, to keep war against Germany going. 'If we should lose this war'—and this in February 1945—it will mean that we have been defeated by the Jews. '[4] Hitler was quite unable to grasp the extent of his own responsibility. Germany was a plaything for fate, doomed by the forces of world history to fight on 'until our last drop of blood has been shed'. Hitler thought the suffering would be redemptive, purifying, good for Germany. Out of the ashes of defeat, a new Reich would arise.

No one doubts that the war was ultimately Hitler's responsibility, or that Hitler made mistakes on a grand scale. In most postwar explanations of the outcome Hitler's failings stand at the head of the list. The story is a familiar one. German victories early in the war were the result of short, opportunistic campaigns against enemies who were weaker and isolated. In 1941 Hitler made the mistake of invading the Soviet Union in the belief that the tactics of 'lightning war' would bring victory in four months. In December 1941 Germany found herself at war with a combination of the three largest industrial economies outside Continental Europe, a war that Germany, allied to economically weak states, could never hope to win. Hitler's belief that a German super-power could tear up the political structure of Europe and western Asia and replace it with a Party-led authoritarian empire was always irrational and deluded.

Much of this argument comes with hindsight. The idea that the whole imperial enterprise was flawed from the outset is a post-war rationalisation. Moreover, Eastern Europe was dominated for forty years after the war by an authoritarian super-power, run by single-party dictatorships which denied civil rights and smothered society with secret policemen and a thick blanket of ideological conformism. The Soviet bloc lacked the wanton destructiveness and deadly racism that a Nazi empire would have displayed, but there was nothing deluded or irrational about the new system. The dominance of communism and the Red Army was achieved as a direct consequence of the power they had built up in the military defeat of the Nazi empire.

The assumption that German defeat was a result of fighting a 'two-front war' is also questionable. There is no necessary link between military defeat and fighting a two-front war. The United States fought a war on three fronts—five if the bombing offensive and the Battle of the Atlantic can be defined as fronts in their own right. All of those fronts competed with each other for resources of manpower, shipping and weaponry, and all bar the Atlantic were thousands of miles from the security of the home country, situated at the end of long and vulnerable shipping lanes. The Soviet Union was the only major combatant power to fight a one-front war, although for much of the critical central period of the war Germany too fought on one main front until the western Allies threw the full weight of their forces into France in the summer of 1944. For much of the First World War Germany survived a two-front war until the Russian war effort collapsed in 1917, but paradoxically she was defeated in a one-front war in 1918.

Clearly the fact of a two-front war is not an explanation for defeat as such. But are we on safer ground with the proposition that Germany was overwhelmed by the economic size of the coalition assembled against her from 1942? This has always been a popular view. In 1946 the economist Raymond Goldsmith claimed that Gross Domestic Product won the war: the Allies simply had more of it than the Axis. Even during the war such a view was not uncommon. When Maxim Litvinov, deputy to the Commissar of Foreign Affairs, heard the list of American and British supplies read out at a meeting in Moscow in September 1941, he broke all the rules of Soviet negotiation, leapt out of his chair and shouted: 'Now we shall win the war!'[5] This was before American belligerency turned the United States into a fighting power rather than just so much inviting GDP.

The drawbacks in this argument have already been laid out, but they are worth a curtain call. Economic size as such does not explain the outcome of wars. China had on paper a large economic product in the 1930's, but it did not help to make China a significant warring state. If we qualify the explanation to cover only the product of industrial powers then there remains the awkward evidence that Germany had greater industrial capacity than Britain in 1940, and access by 1941 to a good deal more than Britain and the Soviet Union together, and yet was unable to bring either power to defeat. And had Germany prevailed in Europe before 1942, could the United States really have used its larger GDP to reconquer the Old World? The balance of economic product explains everything and nothing. Political will, technical modernity, a popular willingness to accept, sacrifice, the simple constraints of geography, these are just some of the many variables that affect the mobilisation of economic resources. The line between material resources and victory on the battlefield is anything but a straight one. The history of war is littered with examples of smaller, materially disadvantaged states defeating a larger, richer enemy. General Eisenhower, listening to politicians in Washington in the spring of 1942 talk glibly about the economic defeat of the Axis, observed in his diary that 'not one man in twenty in the government realises what a grisly, dirty, tough business we are in. They think we can buy victory.'[6]

There was no other way for the Allies to dislodge the Axis states from their conquests in 1942 than to defeat them on the battlefield. As Stalin put it, they were not going to jump into the abyss without being pushed. Some way might have been found of ending the war by negotiation, but this would certainly have meant making concessions to Axis imperialism. Fighting, and fighting better, was the only way to expel Germany and Italy from the European New Order, or to drive Japan from her new sphere of influence in Asia. Fighting power owed something in the long run to the large surplus of weapons available to the Allies, though in the critical battles of 1942 and 1943 that surplus was not as large as it became in 1944 and 1945 when Axis defeat was much more certain. In the first years of war the chief Allied states did not fight well, or were ill prepared for conflict. They were at a distinct disadvantage against Germany and Japan whose fighting skills prompted their rulers to risk war with industrially rich powers in the first place. Neither the Japanese nor German leaders rated Allied fighting power very highly, and they thought even less of it after their early successes. The Japanese military in the southern zone became over-confident. Rear-Admiral Takata remembered after the war the views he had heard: 'They said the Americans would never come, that they would not fight in the jungle, that they were not the kind of people who could stand warfare . . .'[7] Hitler formed the same dismissive view of the enemy. The first reports on American troops in North Africa suggested that they were simply 'rowdies' who would 'take to their heels very quickly'. Hitler thought America could never become 'the Rome of the future' with such poor spiritual stock.[8]

To win the war the Allies had to learn to fight more effectively, just as in the early 1800s the Coalition partners learned to tame Napoleon. They had to be prepared to fight together, and to continue to fight until the end of the conflict. Issues of morale and politics intimately affected the fighting power of the Allies, as did the strictly military elements of command, training, equipment and tactics. In Marshall's view the will to collaborate was the nub of the matter: 'In my opinion,' he told an audience at Yale in February 1944, 'the triumph over

Germany in the coming months depends more on a complete accord between the British and American forces than it does on any other single factor, air power, ground power or naval power . . .'[9] Marshall's audience, who would have known nothing of the arguments between the Allies, must have puzzled at his cryptic remarks on the harmful effects of past 'discord', but unity of purpose and plan was not something to be taken for granted. It was always under strain: in the bombing offensive (where British and American air forces fought different campaigns, by day and by night); in the arguments about the route of re-entry to Continental Europe; in the tension between Soviet demands for a Second Front and western hesitation. It is no coincidence that Germany was defeated during the nine-month period when all three Allies, assisted by the exiled forces of the conquered European lands, put the main weight of their military effort together for the first time.

The Allies would have been the first to admit that fighting power was their real weakness. After the terrible defeats of the summer and autumn of 1941 the Soviet General Staff began a comprehensive review of what had gone wrong and right in Soviet practice. By March 1943 five volumes of critical analysis were published, covering everything from the use of tanks and aircraft to the laying of smoke-screens and the use of gunboats on Russia's rivers.[10] The fruits of Allied reflection have already been discussed, and need only a brief summary here. The reforms covered both the organisation of forces and their equipment and operational skills. The purpose was to achieve improvement in the qualitative performances of all Allied forces and technology, without which quantitative supremacy would have availed little. With better training and improved weapons the morale of Allied troops was also raised appreciably. Mistakes were still made, but the gap between the two sides narrowed in every sphere of combat.

The Allies did not depend on simple numbers for victory but on the quality of their technology and the fighting effectiveness of their forces. Axis forces did little to alter the basic pattern of their military organisation and operational practice, or to reform and modernise the way they made war. They were not under the same urgent pressure as their enemies and they responded more slowly to the sudden swing in the balance of fighting power evident in 1943. There is a deeper contrast here. In Germany and Japan much greater value was placed on operations and on combat than on organisation and supply. Here were societies where military endeavour ranked as the highest social duty, where military elites dominated the waging of war. The best military brains were at the battlefront, not in the rear. It is inconceivable that a Marshall or an Eisenhower, with no combat experience between them, could have won supreme command in either the German or Japanese war effort. The German army was notorious for its stubborn inability to release from conscription men whose scientific or managerial skills were in desperate need on the civilian front. Staff officers were obliged to spend time fighting at the front, which explains why even the armed forces were starved of large numbers of experienced planners and organisers. One-quarter of all air force staff officers were killed or captured at the front.[11]

In both Germany and Japan less emphasis was placed upon the noncombat areas of war: procurement, logistics, military services. In the Pacific War there were eighteen American personnel for every one serviceman at the front. The ratio in the Japanese forces was one to one. The post-war bombing survey of Japan observed the marked failure of Japanese air forces to provide 'adequate maintenance, logistic support, communications and control, or airfields and bases . . . Young Japanese men did not want to be maintenance engineers—they wanted to fly.[12] In the German army in Europe there were roughly two combatants for every non-combatant; but the American army had a ratio almost exactly the reverse, one fighter for every two service personnel. Some measure of the emphasis Marshall placed upon military services can be seen in his decision to divide the army into three separate components, ground forces, air forces and services, each with equal representation on the main staff committees.[13] The American backup for its combat troops was formidable. One German divisional commander in Normandy reported back the visible effects of the American supply system:

> I cannot understand these Americans. Each night we know that we have cut them to pieces, inflicted heavy casualties, mowed down their transport. But—in the morning, we are suddenly faced with fresh battalions, with complete replacements of men, machines, food, tools and weapons. This happens day after day . . .[14]

Stalin paid the same close attention to servicing Red forces. The Red Army, like the American, had a large and influential service sector under the Main Directorate of the Red Army Rear, whose chief sat on the Defence Committee on equal terms with the combat commanders. Its director, General Khrulev, remembered after the war that his job was regarded by Stalin as 'operational work, organically linked to the combat operations of the troops . . .'[15]

In the 1940s both Germany and Japan were highly militarised societies. The forces controlled the selection and development of weapons; they bullied and harassed manufacturers to produce what they wanted; they jealously guarded military prerogatives, even to the extent of long and damaging feuds between the separate services. They resented and rejected interference and direction from mere civilians. Allied forces were by contrast supported by a large civilian apparatus; many of the senior commanders were civilians in uniform, and very conscious of it. The United States was so unprepared for war in 1941 that there was no alternative but to bring in men with virtually no military experience at all. Industry was freer to concentrate on large-scale production; scientists were freer to develop and experiment; managerial skills were rewarded as well as combat skills. No doubt Axis militarism brought its own rewards, but it made it harder to build a strong coalition of civilian and military expertise, or to capitalise on the early victories once the Allies were able to mobilise their economic, intellectual and organisational strengths for the purpose of waging war. The Allies, both dictatorship and democracies were committed to the rational exploitation of modernity. The Axis states sought to press modernity into the service of irrational or reactionary causes.[16]

For all this, the margin of victory or defeat was often so slender that general theories look out of place. Battles are not pre-ordained. If they were, no one would bother to fight them. The decisive engagement at Midway Island was won because ten American bombs out of the hundreds dropped fell on the right target. The victory in the Atlantic came with the introduction of a small number of long-range aircraft to cover the notorious Atlantic Gap. The bombing offensive, almost brought to a halt in the winter of 1943-4, was saved by the addition of long-range fuel tanks to escort fighters, a tiny expense in the overall cost of the bombing campaign. The Battle of Stalingrad depended on the desperate, almost incomprehensible courage of a few thousand men who held up the German 6th army long enough to spring a decisive trap. The invasion of France hung on the ability to keep the enemy guessing, against every conceivable odds, the centre of operational gravity, and then on the weather. It is hardly surprising that Churchill thought at the end of the war that Providence had brought the Allies through.[17]

The Second World War was not of course won in a day, or in a month of good luck. But the narrowness of the margins returns us to the question of winning battles. For all the solid achievements of military reform and of military production, of science and intelligence, which made the Allied forces so much more effective by 1943-4 than they had been only two years before, the military contest still had to be won. Eisenhower's 'grisly, dirty, tough business' had to be endured to the bitter end. Of all the conflicts that made up the war, the one that mattered most to the Allies was the struggle with Germany. On their own Italy and Japan might have made regional gains. The most likely scenario is that without the success of German arms to shield them neither state would have risked war at all. Germany's success in overturning the old European balance of power in less than twelve months opened up possibilities that neither of her allies could have created alone, and even then they hesitated to follow in the German wake. But the German situation was different. The quantity and quality of its armed forces were in another league altogether. The chief instrument of the whole Axis war effort was the German army, more than two hundred divisions strong by 1941, supported by the most modern and effective tactical air force. It was this military strength that had to be defeated to secure Allied victory. The United States devoted only 15 per cent of its war effort to the war with Japan. The other 85 per cent was expended in the defeat of Germany.[18]

If the defeat of the German army was the central strategic task, the main theatre for it was the conflict on the eastern front. The German army was first weakened there, and then driven back, before the main weight of Allied ground and air forces was brought to bear in 1944. Over four hundred German and Soviet divisions fought along a front of more than 1,000 miles. Soviet forces destroyed or disabled an estimated 607 Axis divisions between 1941 and 1945. The scale and geographical extent of the eastern front dwarfed all earlier warfare. Losses on both sides far exceeded losses anywhere else in the military contest. The war in the east was fought with a ferocity almost unknown on the western fronts. The battles at Stalingrad and Kursk, which broke the back of the German army, drew from the soldiers of both sides the last ounces of physical and moral energy. Both sides knew the costs of losing—neither victors nor vanquished, Hitler announced in January 1943, only 'survivors and annihilated'. The other main fronts involved for most of the war much smaller forces. The German army fielded only 20–30 divisions at most in the Italian theatre, but succeeded in preventing Allied victory there for two years. The war in France in 1944, where Germany could have employed over fifty divisions, mostly understrength and some indifferently armed, was fought in its decisive phase between fifteen Allied divisions and fifteen German. Throughout the war German forces kept more tanks, guns and tactical aircraft in the east than on the other fronts.

The German air force, unlike the army, owed its defeat to the western war effort. The revival of Soviet air power in 1942 did a good deal to blunt German tactical air forces, but the main axis of defeat lay across the Reich itself, and was the product of the bombing offensive. The German air force was compelled to adjust to a strategy it had not anticipated, as the bulk of German fighter aircraft had to be moved back to the Reich, behind a rampart of radar, anti-aircraft guns and searchlights, to fulfil the unaccustomed role of defending German industry. By September 1944 80 per cent of the fighter force was based in Germany on anti-bombing missions. The whole air effort was thrown off-balance as priority was given to the production and maintenance of fighters and the proportion of bombers and dive-bombers in the German air force as a whole fell to less than a quarter from well over a half. In the summer of 1944 there were four times as many serviceable fighters as bombers.[19] The advent of the long-range fighter in the spring of that year was fatal for the Germans. The Allies were able to bring the fight all the way to the defensive fighters, which were neither able to attack the bombers—their stated mission—nor to fight off enemy escorts effectively. The German air force was drained of planes and pilots; Allied bombers hemmed in aircraft production and heavily damaged the plants producing aviation fuel. The switch to an anti-bombing strategy, and the destruction wreaked in the battles over the Reich, fatally weakened German air power at the front-line, which had relied on large numbers of medium bombers. Allied air forces enjoyed a superiority of seventy to one in the invasion of France. German ground forces were compelled to fight the last two years of war with limited or non-existent air support. When the last Luftwaffe chief-of-staff, General Karl Koller, sat down at the end of the conflict to address the question 'Why We Lost the War', he reduced it to a single formula: 'What was decisive in itself was the loss of air supremacy.'[20]

In Koller's view, partisan though it no doubt was, 'Everything depends on air supremacy, everything else must take second place.' There is certainly a strong connecting thread of air power trailing through all the major zones of combat. In the war at sea naval power was not entirely superseded by aircraft, but the major naval engagements of the Pacific War were all determined by aircraft firing bombs or torpedoes. In the Atlantic, escort carriers and long-range anti-submarine aircraft brought the U-boat threat to a halt. In 1943 aircraft claimed 149 out of the total of 237 German submarines sunk.[21] Patrolling aircraft kept German naval forces at bay throughout the invasion of France. Allied aircraft took a heavy toll of the merchant shipping in the Mediterranean and in the Pacific. In the invasion battles in 1944 air power was regarded by both sides as the critical factor. 'There is no way by which, in the face of the enemy air force's complete command, we can find a strategy which will counterbalance its positively annihilating effect without giving up the field of battle . . . ': so wrote Field Marshal Kluge to Hitler on 2 July, a few days before the Cobra operation broke open the German front.[22] On the eastern front Soviet air power from the summer of 1943 was able to do what German aircraft had done in Poland, France, Yugoslavia, Greece and Ukraine. Underlying everything was the bombing offensive, whose far-reaching effects on German economic potential and on the German home front was sufficient to limit the expansion of German military might to a point where the Allied ground forces could fight on more than equal terms.

Air power did not win the war on its own, but it proved to be the critical weakness on the Axis side and the greatest single advantage enjoyed by the Allies. Koller, in his reflections on defeat, did not simply attribute the failure in the air to German ineptitude, but recognised also that Germany's enemies drew the right conclusions from the early years of war 'and with an iron tenacity built up a superior air force which alone could lead to victory'. Koller was right that the strategy was a self-conscious one. Perhaps the most important decision was taken in the summer of 1943 in Washington, when General Marshall instructed the air force to draft its contribution to the Victory Programme—in effect to plan America's air war. A small group of airmen led by Colonel Hal George was given the almost impossible task of drafting the plan in nine days at the height of a sticky Washington summer. They sat up until past midnight each night, and twice the team worked all through the night. They knew that Roosevelt had given the green light to produce as much as possible. Each of them worked out the figures for a particular element of air power—heavy-bombing, very-long-range bombing, tactical air support, training, and so on. When they came together at the Washington Munitions Building on a Sunday lunchtime to add all the figures up, they were astonished at the quantities needed to defeat the Axis. The plan was collated and approved, and the work was begun on establishing massive American air power even before America entered the war. The plan was leaked to the press some days before Pearl Harbor. In its essentials it was sent to Hitler by German agents in America. His staff drew up a draft directive—No. 39—to hold the line in Russia, while they planned a course of action to keep American aircraft and men away from Europe. Hitler refused to accept the recommendation, and stuck to the contest with the Red Army.[23]

That decision locked Germany into a strategy in which the defeat of Soviet ground forces was the principal mission. The failure to achieve this ambition exposed German forces not only to a revamped and angry Red Army, but also to the eventual realisation of that massive western air power anticipated in the Victory Programme. Both together defeated German forces, leaving Germany's weaker allies to be destroyed in turn. When the Allies devoted their full attention to Japan in the summer of 1945, the Red Army swept Japanese forces in China aside in a matter of days, while American air forces transformed Japanese cities into open crematoria. The Red Army went on to become the backbone of the Soviet super-power, while American air power became the central pillar of the new military giant in the west. Both developments were the fruit of German aggression. To deny Germany's bid for world power, the Soviet Union and the United States had to become world powers themselves. The war was won in 1945 not from German weaknesses but from Allied strengths.

Even then, complete victory was not attained just through the reform of Allied fighting power, and its effective exploitation on the field of battle. The will to win, to continue through periods of intense crisis, stalemate or defeat, to keep the prospect of victory in sight and to mobilise the psychological and moral energies of a people under threat, proved to be inseparable from the ability to fight better. There is no doubt that at times in the war moral confidence was badly dented; in each Allied state enthusiasm for war had to be actively maintained. Individuals reacted to the demands of war in so many different ways that easy classification is defied. But on balance the commitment of both leaders and led to prosecuting the war to the finish, despite high levels of sacrifice and, in the Soviet case, exceptional losses, proved to be a positive element in the Allied cause. This had little to do with Gross Domestic Product, even if most soldiers had known what it meant. To those in battle the facts of aggregate economic strength were meaningless. People fought for many reasons, from fear, from hatred, from some sense of moral or racial superiority, from loyalty or patriotism. They did not fight to prove the statistics right, but from an effort of will.

There have been ample opportunities since 1945 to show that material superiority in war is not enough if the will to fight is lacking. In Algeria, Vietnam and Afghanistan the balance of economic and military strength lay overwhelmingly on the side of France, the United States, and the Soviet Union, but the will to win was slowly eroded. Troops became demoralised and brutalised. Even a political solution was abandoned. In all three cases the greater power withdrew. The Second World War was an altogether different conflict, but the will to win was every bit as important—indeed it was more so. The contest was popularly perceived to be about issues of life and death for whole communities rather than for their fighting forces alone. They were issues, wrote one American observer in 1939, 'worth dying for'. If, he continued, 'the will-to-destruction triumphs, our resolution to preserve civilisation must become more implacable . . . our courage must mount'.[24]

Words like 'will' and 'courage' are difficult for historians to use as instruments of cold analysis. They cannot be quantified; they are elusive of definition; they are the products of a moral language that is regarded sceptically today, even tainted by its association with fascist rhetoric. Yet in war these are the qualities, this the language, generated by conflict. German and Japanese leaders believed that the spiritual strength of their soldiers and workers would in some indefinable way compensate for their technical inferiority. When asked after the war why Japan lost, one senior naval officer replied that the Japanese 'were short on spirit, the military spirit was weak . . .'[25] and put this explanation ahead of any material cause. Within Germany, belief that spiritual strength or willpower was worth more than generous supplies of weapons was not confined to Hitler by any means, though it was certainly a central element in the way he looked at the world. The irony was that Hitler's ambition to impose his will on others did perhaps more than anything to ensure that his enemies' will to win burned brighter still. The Allies were united by nothing so much as a fundamental desire to smash Hitlerism and Japanese militarism and to use any weapon to achieve it. This primal drive for victory at all costs nourished Allied fighting power and assuaged the thirst for vengeance. They fought not only because the sum of their resources added up to victory, but because they wanted to win and were certain that their cause was just.

The Allies won the Second World War because they turned their economic strength into effective fighting power, and turned the moral energies of their people into an effective will to win. The mobilisation of national resources in this broad sense never worked perfectly, but worked well enough to prevail. Materially rich, but divided, demoralised, and poorly led, the Allied coalition would have lost the war, however exaggerated Axis ambitions, however flawed their moral outlook. The war made exceptional demands on the Allied peoples. Half a century later the level of cruelty, destruction and sacrifice that it engendered is hard to comprehend, let alone recapture. Fifty years of security and prosperity have opened up a gulf between our own age and the age of crisis and violence that propelled the world into war. Though from today's perspective Allied victory might seem somehow inevitable, the conflict was poised on a knife-edge in the middle years of the war. This period must surely rank as the most significant turning-point in the history of the modern age.

Reading 10

THE THREE STAGES OF THE PROTRACTED WAR

Mao Tse-Tung

Since the Sino-Japanese war is a protracted one and final victory will belong to China, it can reasonably be assumed that this protracted war will pass through three stages. The first stage covers the period of the enemy's strategic offensive and our strategic defensive. The second stage will be the period of the enemy's strategic consolidation and our preparation for the counter-offensive. The third stage will be the period of our strategic counter- offensive and the enemy's strategic retreat. It is impossible to predict the concrete situation in the three stages, but certain main trends in the war may be pointed out in the light of present conditions. The objective course of events will be exceedingly rich and varied, with many twists and turns, and nobody can cast a horoscope for the Sino-Japanese war; nevertheless it is necessary for the strategic direction of the war to make a rough sketch of its trends. Although our sketch may not be in full accord with the subsequent facts and will be amended by them, it is still necessary to make it in order to give firm and purposeful strategic direction to the protracted war.

The first stage has not yet ended. The enemy's design is to occupy Canton, Wuhan and Lanchow and link up these three points. To accomplish this aim the enemy will have to use at least fifty divisions, or about one and a half million men, spend from one and a half to two years, and expend more

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than ten thousand million yen. In penetrating so deeply, he will encounter immense difficulties, with consequences disastrous beyond imagination.

As for attempting to occupy the entire length of the Canton-Hankow Railway and the Sian-Lanchow Highway, he will have to fight perilous battles and even so may not fully accomplish his design. But in drawing up our operational plan we should base ourselves on the assumption that the enemy may occupy the three points and even certain additional areas, as well as link them up, and we should make dispositions for a protracted war, so that even if he does so, we shall be able to cope with him. In this stage the form of fighting we should adopt is primarily mobile warfare, supplemented by guerrilla and positional warfare. Through the subjective errors of the Kuomintang military authorities, positional warfare was assigned the primary role in the first phase of this stage, but it is nevertheless supplementary from the point of view of the stage as a whole. In this stage, China has already built up a broad united front and achieved unprecedented unity. Although the enemy has used and will continue to use base and shameless means to induce China to capitulate in the attempt to realize his plan for a quick decision and to conquer the whole country without much effort, he has failed so far, nor is he likely to succeed in the future. In this stage, in spite of considerable losses, China will make considerable progress, which will become the main basis for her continued resistance in the second stage. In the present stage the Soviet Union has already given substantial aid to China. On the enemy side, there are already signs of flagging morale, and his army's momentum of attack is less in the middle phase of this stage than it was in the initial phase, and it will diminish still further in the concluding phase. Signs of exhaustion are beginning to appear in his finances and economy; war-weariness is beginning to set in among his people and troops; and within the clique at the helm of the war, "war frustrations" are beginning to manifest themselves and pessimism about the prospects of the war is growing.

The second stage may be termed one of strategic stalemate. At the tail end of the first stage, the enemy will be forced to fix certain terminal points to his strategic offensive owing to his shortage of troops and our firm resistance, and upon reaching them he will stop his strategic offensive and enter the stage of safeguarding his occupied areas. In the second stage, the enemy will attempt to safeguard the occupied areas and to make them his own by the fraudulent method of setting up puppet governments, while plundering the Chinese people to the limit; but again he will be confronted with stubborn guerrilla warfare. Taking advantage of the fact that the enemy's rear is unguarded, our guerrilla warfare will develop extensively in the first stage, and many base areas will be established, seriously threatening the enemy's consolidation of the occupied areas, and so in the second stage there will still be widespread fighting. In this stage, our form of fighting will be primarily guerrilla warfare, supplemented by mobile warfare. China will still retain a large regular army, but she will find it difficult to launch the strategic counter-offensive immediately because, on the one hand, the enemy will adopt a strategically defensive position in the big cities and along the main lines of communication under his occupation and, on the other hand, China will not yet be adequately equipped technically. Except for the troops engaged in frontal defence against the enemy, our forces will be switched in large numbers to the enemy's rear in comparatively dispersed dispositions, and, basing themselves on all the areas not actually occupied by the enemy and co-ordinating with the people's local armed forces, they will launch extensive, fierce guerrilla warfare against enemy-occupied areas, keeping the enemy on the move as far as possible in order to destroy him in mobile warfare, as is now being done in Shansi Province. The fighting in the second stage will be ruthless, and the country will suffer serious devastation. But the guerrilla warfare will be successful, and if it is well conducted the enemy may be able to retain only about one-third of his occupied territory, with the remaining two-thirds in our hands, and this will constitute a great defeat for the enemy and a great victory for China. By then the enemy-occupied territory as a whole will fall into three categories: first, the enemy base areas; second, our base areas for guerrilla warfare; and, third, the guerrilla areas contested by both sides. The duration of this stage will depend on the degree of change in the balance of forces between us and the enemy and on the changes in the international situation; generally speaking, we should be prepared to see this stage last a comparatively long time and to weather its hardships. It will be a very painful period for China; the two big problems will be economic difficulties and the disruptive activities of the traitors. The enemy will go all out to wreck China's united front, and the traitor organizations in all the occupied areas will merge into a so-called "unified government." Owing to the loss of big cities and the hardships of war, vacillating elements within our ranks will clamour for compromise, and pessimism will grow to a serious extent. Our tasks will then be to mobilize the whole people to unite as one man and carry on the war with unflinching perseverance, to broaden and consolidate the united front, sweep away all pessimism and ideas of compromise, promote the will to hard struggle and apply new wartime policies, and so to weather the hardships. In the second stage, we will have to call upon the whole country resolutely to maintain a united government, we will have to oppose splits and systematically improve fighting techniques, reform the armed forces, mobilize the entire people and prepare for the counter-offensive. The international situation will become still more unfavourable to Japan and the main international forces will incline towards giving more help to China, even though there may be talk of "realism" of the Chamberlain type which accommodates itself to *faits accomplis.* Japan's threat to Southeast Asia and Siberia will become greater, and there may even be another war. As regards Japan, scores of her divisions will be inextricably bogged down in China. Widespread guerrilla warfare and the people's anti-Japanese movement will wear down this big Japanese force, greatly reducing it and also disintegrating its morale by stimulating the growth of homesickness, war-weariness and even anti-war sentiment. Though it would be wrong to say that Japan will achieve no results at all in her plunder of China, yet, being short of capital and harassed by guerrilla warfare, she cannot possibly achieve rapid or substantial results. This second stage will be the transitional stage of the entire war; it will be the most trying period but also the pivotal one. Whether China becomes an independent country or is reduced to a colony will be determined not by the retention or loss of the big cities in the first stage but by the extent to which the whole nation exerts itself in the second. If we can persevere in the War of Resistance, in the united front and in the protracted war, China will in that stage gain the power to change from weakness to strength. It will be the second act in the three-act drama of China's War of Resistance. And through the efforts of the entire cast it will become possible to perform a most brilliant last act.

The third stage will be the stage of the counter-offensive to recover our lost territories. Their recovery will depend mainly upon the strength which China has built up in the preceding stage and which will continue to grow in the third stage. But China's strength alone will not be sufficient, and we shall also have to rely on the support of international forces and on the changes that will take place inside Japan, or otherwise we shall not be able to win; this adds to China's tasks in international propaganda and diplomacy. In the third stage, our war will no longer be one of strategic defensive, but will turn into a strategic counter-offensive manifesting itself in strategic offensives; and it will no longer be fought on strategically interior lines, but will shift gradually to strategically exterior lines. Not until we fight our way to the Yalu River can this war be considered over. The third stage will be the last in the protracted war, and when we talk of persevering in the war to the end, we mean going all the way through this stage. Our primary form of fighting will still be mobile warfare, but positional warfare will rise to importance. While positional defence cannot be regarded as important in the first stage because of the prevailing circumstances, positional attack will become quite important in the third stage because of the changed conditions and the requirements of the task. In the third stage guerrilla warfare will again provide strategic support by supplementing mobile and positional warfare, but it will not be the primary form as in the second stage.

It is thus obvious that the war is protracted and consequently ruthless in nature. The enemy will not be able to gobble up the whole of China but will be able to occupy many places for a considerable time. China will not be able to oust the Japanese quickly, but the greater part of her territory will remain in her hands. Ultimately the enemy will lose and we will win, but we shall have a hard stretch of road to travel.

The Chinese people will become tempered in the course of this long and ruthless war. The political parties taking part in the war will also be steeled and tested. The united front must be persevered in; only by persevering in the united front can we persevere in the war; and only by persevering in the united front and in the war can we win final victory. Only thus can all difficulties be overcome. After traveling the hard stretch of road we shall reach the highway to victory. This is the natural logic of the war.

In the three stages the changes in relative strength will proceed along the following lines. In the first stage, the enemy is superior and we are inferior in strength. With regard to our inferiority we must reckon on changes of two different kinds from the eve of the War of Resistance to the end of this stage. The first kind is a change for the worse. China's original inferiority will be aggravated by war losses, namely, decreases in territory, population, economic strength, military strength and cultural institutions. Towards the end of the first stage, the decrease will probably be considerable, especially on the economic side. This point will be exploited by some people as a basis for their theories of national subjugation and of compromise. But the second kind of change, the change for the better, must also be noted. It includes the experience gained in the war, the progress made by the armed forces, the political progress, the mobilization of the people, the development of culture in a new direction, the emergence of guerrilla warfare, the increase in international support, etc. What is on the downgrade in the first stage is the old quantity and the old quality, the manifestations being mainly quantitative. What is on the upgrade is the new quantity and the new quality, the manifestations being mainly qualitative. It is the second kind of change that provides a basis for our ability to fight a protracted war and win final victory.

In the first stage, changes of two kinds are also occurring on the enemy's side. The first kind is a change for the worse and manifests itself in hundreds of thousands of casualties, the drain on arms and ammunition, deterioration of troop morale, popular discontent at home, shrinkage of trade, the expenditure of over ten thousand million yen, condemnation by world opinion, etc. This trend also provides a basis for our ability to fight a protracted war and win final victory. But we must likewise reckon with the second kind of change on the enemy's side, a change for the better, that is, his expansion in territory, population and resources. This too is a basis for the protracted nature of our War of Resistance and the impossibility of quick victory, but at the same time certain people will use it as a basis for their theories of national subjugation and of compromise. However, we must take into account the transitory and partial character of this change for the better on the enemy's side. Japan is an imperialist power heading for collapse, and her occupation of China's territory is temporary. The vigorous growth of guerrilla warfare in China will restrict her actual occupation to narrow zones. Moreover, her occupation of Chinese territory has created and intensified contradictions between Japan and other foreign countries. Besides, generally speaking, such occupation involves a considerable period in which Japan will make capital outlays without drawing any profits, as is shown by the experience in the three northeastern provinces. All of which again gives us a basis for demolishing the theories of national subjugation and of compromise and for establishing the theories of protracted war and of final victory.

In the second stage, the above changes on both sides will continue to develop. While the situation cannot be predicted in detail, on the whole Japan will continue on the downgrade and China on the upgrade. For example, Japan's military and financial resources will be seriously drained by China's guerrilla warfare, popular discontent will grow in Japan, the morale of her troops will deteriorate further, and she will become more isolated internationally. As for China, she will make further progress in the political, military and cultural spheres and in the mobilization of the people; guerrilla warfare will develop further; there will be some new economic growth on the basis of the small industries and the widespread agriculture in the interior; international support will gradually increase; and the whole picture will be quite different from what it is now. This second stage may last quite a long time, during which there will be a great reversal in the balance of forces, with China gradually rising and Japan gradually declining. China will emerge from her inferior position, and Japan will lose her superior position; first the two countries will become evenly matched, and then their relative positions will be reversed. Thereupon, China will in general have completed her preparations for the strategic counter-offensive and will enter the stage of the counter-offensive and the expulsion of the enemy. It should be reiterated that the change from inferiority to superiority and the completion of preparations for the counter-offensive will involve three things, namely, an increase in China's own strength, an increase in Japan's difficulties, and an increase in international support; it is the combination of all these forces that will bring about China's superiority and the completion of her preparations for the counter-offensive.

Because of the unevenness in China's political and economic development, the strategic counter-offensive of the third stage will not present a uniform and even picture throughout the country in its initial phase but will be regional in character, rising here and subsiding there. During this stage, the enemy will not relax his divisive tricks to break China's united front, hence the task of maintaining internal unity in China will become still more important, and we shall have to ensure that the strategic counter-offensive does not collapse halfway through internal dissension. In this period the international situation will become very favorable to China. China's task will be to take advantage of it in order to attain complete liberation and establish an independent democratic state, which at the same time will mean helping the world anti-fascist movement.

China moving from inferiority to parity and then to superiority, Japan moving from superiority to parity and then to inferiority; China moving from the defensive to stalemate and then to the counter-offensive, Japan moving from the offensive to the safeguarding of her gains and then to retreat—such will be the course of the Sino-Japanese war and its inevitable trend.

Hence the questions and the conclusions are as follows: Will China be subjugated? The answer is, No, she will not be subjugated, but will win final victory. Can China win quickly? The answer is, No, she cannot win quickly, and the war must be a protracted one. Are these conclusions correct? I think they are.

At this point, the exponents of national subjugation and of compromise will again rush in and say, "To move from inferiority to parity China needs a military and economic power equal to Japan's, and to move from parity to superiority she will need a military and economic power greater than Japan's. But this is impossible, hence the above conclusions are not correct."

This is the so-called theory that "weapons decide everything," which constitutes a mechanical approach to the question of war and a subjective and one-sided view. Our view is opposed to this; we see not only weapons but also people. Weapons are an important factor in war, but not the decisive factor; it is people, not things, that are decisive. The contest of strength is not only a contest of military and economic power, but also a contest of human power and morale. Military and economic power is necessarily wielded by people. If the great majority of the Chinese, of the Japanese and of the people of other countries are on the side of our War of Resistance Against Japan, how can Japan's military and economic power, wielded as it is by a small minority through coercion, count as superiority? And if not, then does not China, though wielding relatively inferior military and economic power, become the superior? There is no doubt that China will gradually grow in military and economic power, provided she perseveres in the War of Resistance and in the united front. As for our enemy, weakened as he will be by the long war and by internal and external contradictions, his military and economic power is bound to change in the reverse direction. In these circumstances, is there any reason why China cannot become the superior? And that is not all. Although we cannot as yet count the military and economic power of other countries as being openly and to any great extent on our side, is there any reason why we will not be able to do so in the future? If Japan's enemy is not just China, if in future one or more other countries make open use of their considerable military and economic power defensively or offensively against Japan and openly help us, then will not our superiority be still greater? Japan is a small country, her war is reactionary and barbarous, and she will become more and more isolated internationally; China is a large country, her war is progressive and just, and she will enjoy more and more support internationally. Is there any reason why the long-term development of these factors should not definitely change the relative position between the enemy and ourselves?

The exponents of quick victory, however, do not realize that war is a contest of strength, and that before a certain change has taken place in the relative strength of the belligerents, there is no basis for trying to fight strategically decisive battles and shorten the road to liberation. Were their ideas to be put into practice, we should inevitably run our heads into a brick wall. Or perhaps they are just talking for their own pleasure without really intending to put their ideas into practice. In the end Mr. Reality will come and pour a bucket of cold water over these chatterers, showing them up as mere windbags who want to get things on the cheap, to have gains without pains. We have had this kind of idle chatter before and we have it now, though not very much so far; but there may be more as the war develops into the stage of stalemate and then of counter-offensive. But in the meantime, if China's losses in the first stage are fairly heavy and the second stage drags on very long, the theories of national subjugation and of compromise will gain great currency. Therefore, our fire should be directed mainly against them and only secondarily against the idle chatter about quick victory.

That the war will be protracted is certain, but nobody can predict exactly how many months or years it will last, as this depends entirely upon the degree of the change in the balance of forces. All those who wish to shorten the war have no alternative but to work hard to increase our own strength and reduce that of the enemy. Specifically, the only way is to strive to win more battles and wear down the enemy's forces, develop guerrilla warfare to reduce enemy-occupied territory to a minimum, consolidate and expand the united front to rally the forces of the whole nation, build up new armies and develop new war industries, promote political, economic and cultural progress, mobilize the workers, peasants, businessmen, intellectuals and other sections of the people, disintegrate the enemy forces and win over their soldiers, carry on international propaganda to secure foreign support, and win the support of the Japanese people and other oppressed peoples. Only by doing all this can we reduce the duration of the war. There is no magic short-cut.

Reading 11

THE STRATEGY OF REVOLUTIONARY WAR

Lieutenant General Phillip B. Davidson (Ret.)

> *"Revolutionary war is a bold new form of aggression which could rank with the discovery of gunpowder."*
>
> —Hubert Humphrey, 1965

In my first book, *Vietnam at War,* I attempted to show in both the first and last chapters the dominant role played in the Vietnam conflict by the enemy's Strategy of Revolutionary War. From a study of the reviews of the book and from the many informal questions and comments submitted by readers, I know now that I failed to establish the unique significance of this enemy strategy in the Vietnam War. I suppose that I should not be too harsh on myself; after all, the enemy's Strategy of Revolutionary War was the great "secret" of the Vietnam War. It was a "secret" then, and in most quarters is a "secret" now. Let me try once more, then, to reveal this "secret" and its monumental impact on the conflict.

The Vietnam War can be understood only, in terms of North Vietnam's Strategy of Revolutionary War. This book will not make many categorical statements, but that is one of them. The reason for the dominance of the enemy's Strategy of Revolutionary War lay in their possession of the strategic initiative.

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LTG (Ret.) Davidson was an assistant professor of military history at West Point.

We danced to the North Vietnamese strategic tune, for it was the Communists who determined the style and scale of the war.

The United States gave North Vietnam the strategic initiative, a prize of singular value, by the restraints the various American administrations placed on our forces in Vietnam. In the ground war, the United States Army and Marines were restricted to South Vietnam and could not attack enemy sanctuaries and bases in southern North Vietnam, Laos, or, until too late, in Cambodia. Nor could the ground forces sever the Ho Chi Minh Trail, the Communists' logistical lifeline from North Vietnam to its army in the South. Our air assault against North Vietnam was hampered throughout most of the war by target restrictions and bombing pauses which permitted the enemy to build effective defenses against our halfhearted attacks.

We conceded the strategic initiative to the enemy in other ways. Our political and diplomatic offenses were halting and ineffective. Our ambiguity as to our objectives and strategy in Vietnam contrasted with the enemy's singleness of purpose and the sure grasp of his own strategy, which allowed the Communists to gain and keep the initiative. Not until the so-called "Christmas bombings" of December 1972 did the United States fleetingly seize the strategic initiative from Hanoi.

Three North Vietnamese strategists formulated this dominant Strategy of Revolutionary War. They were: Senior General Vo Nguyen Giap, the North Vietnamese minister of Defense and commander in chief of all North Vietnamese forces; Truong Chinh, the North Vietnamese theoretician; and, of course, that wily old revolutionist, Ho Chi Minh. This trio derived their potent concepts from a mixture of the theories and actions of Mao Tse-tung, Lenin, Lawrence of Arabia, Napoleon, Clausewitz, and the Chinese military philosopher of antiquity, Sun Tzu. It is a powerful strategy, and one for which no successful countermeasures have yet appeared.

The Strategy of Revolutionary War has as its objective the seizure of political power in a nation-state. In operation, it totally integrates two principal forms of force, armed conflict and political conflict, which the North Vietnamese call military *dau tranh* (struggle) and political *dau tranh*. Their integration creates a kind of war heretofore unseen: a war waged on several fronts, not geographical fronts, but programmatic fronts, all conducted by one authority, all carefully meshed to serve one end—the seizure of national power.

Military *dau tranh* encompasses all types of conflict, from the assassination of a single government official, to a full scale conventional war of divisions, tanks, artillery, antiaircraft missiles, tactical air forces, and naval armadas. Due to its nature, the military aspects of revolutionary war progress (at least theoretically) through three distinct phases. In Phase I the state to be overthrown is militarily stronger than are the revolutionists, so the latter avoid combat, resorting to guerrilla warfare composed of small raids, ambushes, sabotage, and terrorism. As the revolutionists gain strength, they enter into Phase II of the Strategy of Revolutionary War, a stage of rough military parity with the state's forces. This phase is characterized by a combination of guerrilla actions and conventional war. Finally, in Phase III the military power of the revolution exceeds that of the state, and the revolutionary forces go over almost totally to conventional war. Military *dau tranh* culminates in the "General Counteroffensive" or "General Offensive," which aims at the total military defeat of the armed forces of the state.

Political *dau tranh* encompasses a much broader spectrum of nonmilitary power than the term implies to Westerners. It includes not only political and diplomatic elements, but psychological, ideological, sociological, and economic components as well. Political *dau tranh* consists of three separate programs: The first, *dan van,* is action to mobilize the people in Communist controlled areas and to use them as an instrument of war. Included in this program is an elaborate procedure to indoctrinate and motivate Communist troops. The second program, *dich van,* encompasses actions aimed at undermining the morale and loyalty of the enemy population. The third, *binh van,* are actions aimed at disaffecting the enemy soldiers. All of these programs utilize a mixture of terrorism, subversion, propaganda, disinformation, riots, and uprisings.

As military *dau tranh* moves through three overlapping stages, so too does political *dau trahn.* In the early stages of an insurrection, when the military power of the revolution is weak, political *dau tranh* predominates. The revolutionist agitates and mobilizes the people, and the political infrastructure is recruited and trained. As the military power of the revolution grows, armed force plays a more key role, but nevertheless, in Phase I, political *dau tranh* is predominant. In Phase II, a combination of guerrilla war and conventional war, there is a rough equivalence of effort between military *dau tranh* and its political mate. In the final Phase III stage, conventional war is emphasized and the political effort fades—never completely, for revolutionary war is always a political war. In fact, the North Vietnamese version of revolutionary war sees a great political climax, a final spontaneous uprising of the masses, the "Great Uprising." This "Great Uprising," linked with the "Great Offensive," overthrows the state and brings the revolutionary group to power.

While in theory there is a steady progression through the three stages of revolutionary war, in practice this does not necessarily occur. Due to the actual situation, the revolutionists may find it desirable, or even necessary, to revert to an earlier phase—for example, from Phase II back to the emphasis on political *dau tranh* and guerrilla warfare of Phase I.

The Strategy of Revolutionary War (North Vietnamese style) has certain inevitable characteristics.

1. It is a *total war.* It mobilizes all the people whom the revolutionists control. It uses to the utmost every available facet of power.
2. It is waged with *total unity of effort,* every element of power coordinated with the others to gain the objective. Douglas Pike, the

foremost expert on Vietnamese communism in the West, calls it "a seamless web." Truong Nhu Tang, one-time Viet Cong Minister of Justice, described this unified effort thusly, "Every military clash, every demonstration, every propaganda appeal was seen as part of a unified whole; each had consequences far beyond its immediately apparent results."

3. It is by necessity and choice a *protracted war.* In the beginning, the revolution needs time to build a political base and to develop military power. In the later stages of revolutionary war, protracted war erodes an opponent's will to continue the conflict.
4. It stresses the gaining and keeping of *the initiative.* This pertains not only to the military initiative, but to the political and psychological initiatives as well. For example, after the Tet offensive, the North Vietnamese abandoned the *tactical* military initiative in South Vietnam and launched a psychological offensive aimed at the destruction of the will of the American people to continue the war. Revolutionary war teaches that only by holding the initiative and utilizing the offensive can the revolutionists take advantage of an opponent's weaknesses.
5. It is a *changing war,* featuring a constant shift between Phases with consequent changes in the mix and importance of military and political *dau tranh.* During the Vietnam War, the most critical problem faced by the North Vietnamese was to determine what phase of revolutionary war they were in at any given time and toward what phase they were moving. As will be seen, these questions dominated the debates within the North Vietnamese Politburo and led to the most bitter disputes within that body.
6. Revolutionary war is a "*mosaic*" war. In one area it may be in Phase III, conventional war, while nearby it may be in Phase II, and somewhere else it may be a Phase I insurgency. For example, in late 1967 a large-scale conventional war (Phase III) raged along the Laotian border of northern South Vietnam and around the DMZ. At the same time, a Phase II situation (conventional war/insurgency) prevailed in mid-South Vietnam, while a pure Phase I insurgency existed in the Mekong Delta of southern South Vietnam. Under the North Vietnamese Strategy of Revolutionary War, each situation required military tactics and a different mixture of military and political *dau tranh.*

The three different phases of revolutionary war could exist in even closer proximity to each other. In 1967–1968, the South Vietnamese I Corps area, also known as Military Region I (MR I), the northern five provinces of South Vietnam, had a Phase I insurgency in its southern coastal province of Quang Ngai, a Phase II (combination) in the two adjoining provinces to the north, and a good size conventional war (Phase III) in the two northern provinces of Quang Tri and Thua Thien. Truong Chinh in his seminal work, *Primer for Revolt,* described revolutionary war as "disordered and muddled," and he was right.

This understanding of the Strategy Revolutionary War will place most of the disputes about strategic concepts (both North Vietnamese and American) in a comprehensible perspective. From the earliest days of their war against the French, the Vietnamese Communists (then known as the Viet Minh) debated about what phase of revolutionary war they were in at the moment of argument and to which phase they were then moving. As far back as 1944, Giap, then in command of a small poorly armed rabble, in Ho's absence planned to launch a "military offensive" in the remote mountainous area of northern North Vietnam. Ho Chi Minh resumed and promptly canceled the offensive because he deemed it premature. To Ho, the Viet Minh were in early Phase I, the political building phase, not in Phase II, as Giap believed. In 1951, with Ho's approval, Giap launched a "General Counteroffensive," a Phase III attack, to drive the French from the Tonkin Delta, and if successful, from North Vietnam. The Viet Minh offensive, misconceived and mismanaged, collapsed with heavy Communist casualties. Again, Giap was premature. In 1951 the Viet Minh were in Phase II, and Giap's attempt to move them into the final stages of Phase III, for which the prerequisites did not exist, proved disastrous. The necessary prerequisites for a Phase III offensive did exist in 1953–1954, and at Dien Bien Phu the Communists won Indochina War I.

In Indochina War II (against the South Vietnamese and the Americans), the Communist debate about the phases of revolutionary war centered on the war in South Vietnam. From 1954 (the end of Indochina War I) until 1961, there was agreement throughout the Communist leadership in Vietnam that the Communist revolution in South Vietnam was a Phase I insurgency. From 1961 until mid-1965, the members of the North Vietnamese Politburo argued bitterly as to whether the insurgency in the South was in Phase I or Phase II. Strangely enough, the arguments were publicized in the Hanoi press and over Radio Hanoi. Giap and Truong Chinh, the theoreticians of revolutionary war, held that the war in South Vietnam during the early Sixties was a Phase I insurgency. Conversely, Nguyen Chi Thanh, the Communist commander in South Vietnam, plus Le Duan and Le Duc Tho (the so-called "southern clique") contended that the southern war had entered Phase II.

The "southern clique" triumphed in these debates of 1961–1965, and their victory moved the war into Phase II in 1965, as both United States and North Vietnamese ground units joined the conflict. In early 1968, with the Tet offensive and the siege of Khe Sanh, the North Vietnamese moved into Phase III, conventional war. Giap and Truong Chinh opposed this escalation of the war, maintaining that the Communists in South Vietnam had not progressed far enough militarily or politically to support this final phase of the General Offensive—

General Uprising. Giap and Truong were right. The General Offensive collapsed with ghastly casualties, and the General Uprising never arose.

Faced with the military debacle of the Tet offensive in mid 1968, Giap and Truong argued for a retrogression into Phase II of revolutionary war, a combination of insurgency and small unit conventional war. Again, the southern clique adamantly disputed them, insisting on a continuation of the large scale conventional operations of Phase III. This time Giap and Truong won. In mid 1968 the Communists moved backward into Phase II and in early 1969, further retrogressed into Phase I. This Phase I insurgency, however, differed from the previous Phase I insurgency in two ways. First, the small, insurgency-type operations were carried out, not by the Viet Cong guerrillas, but by North Vietnamese sappers, who were elite commandos. Second, waiting in the sanctuaries of Laos, Cambodia, and the DMZ, were the divisions and corps of the VC and NVA Main Forces, ready to move the war back into Phase III instantly.

By 1972 the Communists had rebuilt their forces in the South and, following the withdrawal of United States ground forces, moved into Phase III with their so-called Easter offensive. Giap and Truang Chinh again opposed this escalation, arguing, for a delay of another year. They lost the argument—the offensive took place. But Giap and Truong won the consolation prize of having been right—the offensive failed with bloody casualties.

Following the Easter offensive, the North Vietnamese reverted again to Phase II operations against the South Vietnamese. By early 1975 they had regained their offensive strength and launched the final campaign, a Phase III all-out conventional war with over twenty divisions, hundreds of tanks, and even a small tactical air force. This array won the war.

American leaders disputed about the proper strategy as vigorously and as acrimoniously as did the North Vietnamese Politburo. Between the Americans and the North Vietnamese, however, there was one tremendous difference—disputes within the Politburo concentrated, properly, on which phase of revolutionary war existed at any given time. The arguments among the Americans, on the other hand, dwelt on the viability and desirability of various strategic options open to the United States, without reference to, or knowledge of, the governing factor of the conflict— the Strategy of Revolutionary War. United States strategy should have been based solidly on the fact that the enemy had the strategic initiative, which left the United States with two options—first, take the strategic initiative away from the Communists, or second, counter whatever phase of revolutionary war the enemy was carrying out. Since the American leaders elected not to seize the strategic initiative until Christmas 1972, they selected by the same token the second alternative. But they failed here too. Not understanding revolutionary war, they were unable to determine the current phase of the enemy's strategy, and from this base, to fashion the proper American countermeasures.

To this day, debates rage as to what should have been the correct American ground strategy in Vietnam. Should we have elected as the predominant concept clear and hold strategy, the enclave strategy, the strategy of attrition, the strategy of limited war, or even a modified version of the strategy of annihilation? The disputes were, and are, muddled by two aspects of revolutionary war—its changing nature, and its "mosaic" character. Thus, each of the American disputants is able to cite a situation in a given time frame or in a particular area showing that the war was really an insurgency, or a Phase II combination, or a Phase III conventional war. Then, armed with *his* special situation, the disputant argues for the general application of this particular American counterstrategy to the ground war as a whole.

A comprehension of the Strategy of Revolutionary War with its changing and mosaic nature would have indicated that the proper United States counterstrategy, like the strategy with which it contended, had to be changing and mosaic in character itself. For example, from 1954 to 1961, the United States, then advising the South Vietnamese government, should have based its concepts on countering a Phase I Communist insurgency. In this phase, the strategy of clear and hold and the enclave strategy were both valid. From 1961 until 1965, as the war moved from Phase I to Phase II (a combination of insurgency and conventional war), a different American/South Vietnamese counterstrategy was appropriate. The correct strategy during this period was a combination of clear and hold and attrition, with the weight of the effort given to clear and hold.

From 1965 to 1968, as the war shifted from Phase II toward Phase III (conventional war), the same strategy was appropriate, although now concentrating more on attrition. In 1968 the American counterstrategy should have shifted again towards all-out conventional war. In late 1968 and 1969–1972, as the enemy retrogressed into Phase II and then into Phase I (sapper version), American strategy should have shifted to meet the new situation. In 1972 with the enemy's Easter offensive, American strategy, correctly, shifted to conventional war (Phase III).

There is another aspect of this complicated business of countering the changing nature of revolutionary war. The authors of the American counterstrategy must know not only what phase of revolutionary war the conflict is in, but toward what phase it is moving. The counterstrategy to a given phase of revolutionary war determines such by-products as tactics, organization, training, intelligence operations, equipment, logistics, and base construction, to name only a few activities dependent on the adopted strategy. To counter a Phase I insurgency, for example, requires different tactics, organization, equipment, etc., than does the opposition to a Phase III conventional war. Now, it takes time to make the necessary adjustments of organization, equipment, and training, etc., to meet each new enemy phase. So, just as the strategist of revolutionary war must anticipate the next phase of revolutionary war, so too must the counterstrategist.

These shifts of American counterstrategy just discussed deal only with one facet of revolutionary war—its *changing* nature. United States concepts had also to deal with the *mosaic* character of revolutionary war. While the overall United States counter strategy should have been based on the progressions and retrogressions of the North Vietnamese Strategy of Revolutionary War, there would have had to be a variation of strategies to counter the problems arising from differing situations in various areas. For example, in 1967–1968, one American counterstrategy was appropriate to meet the Phase III conventional war along the DMZ, but this concept would be totally inappropriate to contend with the Phase I insurgency deep in the Mekong Delta.

An example of the controversy which the mosaic nature of revolutionary war can cause was, and still is, the acrimonious dispute between the United States Marine Corps and General Westmoreland as to the proper ground strategy for 1967. The marines maintain that the war was essentially an insurgency, and that some form of a clear and hold or enclave strategy was appropriate. To this end they formed the Combined Action Platoons (CAPs), composed of fifteen marines and thirty-four local South Vietnamese militia. This platoon permanently occupied a village or hamlet, giving protection to the inhabitants. By the end of 1967, the marines had sixty-seven such teams in the villages of their area of tactical responsibility.

General Westmoreland and the other army leaders decried the CAP concept as a form of defensive strategy. As they saw things, it surrendered the tactical initiative to the Communists. Beyond that it allowed the enemy's large regular units, concentrated largely in the two northern provinces of the marine's area, to move about at will, while the marines hunkered down in their enclaves around Chu Lai and Da Nang. Westmoreland urged the marines to take the offensive and seek out the large enemy units and destroy them.

In actuality, both the marines and Westmoreland were right—they were just looking at different pieces of the mosaic. Westmoreland, from his overall view as the senior commander in South Vietnam in 1967, sensed that countrywide the enemy was in Phase II, moving rapidly to Phase III. This was particularly true in the two *northern* provinces of the marines' area of responsibility. On the other hand, the marines were concentrating on their *three southern* provinces, where a particularly virulent and longstanding brand of insurgency flourished. Westmoreland's emphasis on large unit search and destroy operations didn't make much sense in the guerrilla infested southern part of the marines' area. Conversely, the CAPs were inappropriate to the Phase II/Phase III situation around the DMZ. But neither in 1967—nor now—did any of the disputants recognize that they were looking at different parts of the mosaic of revolutionary war.

Thus, the great "secret" of the Vietnam conflict was the enemy's Strategy of Revolutionary War. Most people knew, or sensed, parts of it, but only a handful saw this "secret" clearly and wholly, and then, generally well after the end of the war. Most critics of the war have not seen it even yet. And so, some two decades later, the bootless arguments and controversies continue.

One of the controversies developed around another "secret" of the Vietnam War—with the word, "secret," being used again to mean something which has been made confused or obscure to the general public. And this is strange, for this controversy developed into one of the most memorable trials in American history—*Westmoreland v. CBS. Welcome, therefore, to the "numbers game."*

Reading 12

A STRATEGY OF TACTICS

Andrew F. Krepinevich, Jr.

Armies frequently are accused of preparing for the last war instead of the next. This charge, regardless of its validity, implies that the institution as a collective has learned from its most recent conflict. Dr. Andrew Krepinevich raises serious questions concerning the learning ability of the U.S. Army, particularly in the realm of tactical doctrine, during its long Vietnam experience. The careful and well-documented manner in which the inquiry proceeds permits the work to be read on two planes. First, the student of organizational behavior and institutional learning will find the work to be an excellent case study in large-scale bureaucracy. Second, the practitioner or scholar of war will discover an engaging and scholarly critique of the U.S. Army and its ability to fit tactics, doctrine, and strategy to the fog-shrouded terrain of a people's war under modern conditions. I shall comment on the latter of these two dimensions.

Doctrine, in a sense, is a distillation of collective wisdom or collective will that the institutional leadership uses to condition the ways in which the people who make up the institution execute and plan present and future training and operations. For the U.S. Army, the

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doctrine of the past thirty-five years or so emerged from the experience of World War II, or more accurately, from a set of assumptions based on that experience and was codified in field manuals, service-school curricula, training programs, and the like, largely in the first five years following the war. The future war that the Army was to be prepared to fight was, above all, one rather like World War II in the European Theater of Operations (especially the sector of Bradley's Twelfth Army Group) from the breakout at St. Lô to the end of the war. Changes in organization and weaponry, slight modifications or refinements in doctrine, and experience in combat in such places as Korea, Vietnam, and elsewhere did not contribute in any important way to changing the fundamental assumption that the future war, what Krepinevich rightly terms the "Army Concept," was to be World War II from July 1944 to May 1945 in Western Europe *mutatis mutandis* because of nuclear weapons (sometimes) and helicopters (increasingly) added to the battlefield. Indeed, the combats and battles of Korea, Vietnam, and other campaigns were treated in retrospect as if each were *sui generic,* so that whatever adjustments to doctrine had to be made in the course of each could be relegated to the "special-case" category and thus required no permanent adjustment or modification of the Army Concept or the doctrine based on it.

Doctrine became dogma. The institutional paradigm was fixed. Over time, moreover, dogma had a pernicious effect on the relationships between strategy, the operational art, and tactics. Tactics, based on doctrine derived from the Army Concept, dominated the operational art, and in turn, strategy was dominated by the operational art and tactics. Success in tactical operations, that is, victory in individual battles, replaced the accomplishment of a campaign plan based on strategy intended to attain the objectives of the war. The latter were assumed to be attainable through additive victories in battles. The effect of this approach to war, standing Clausewitz on his head, is obvious in Col. Harry Summers's *non pareil* statement to his Vietnamese counterpart in 1975: "You know you never defeated us on the battlefield."[1]

In mitigation it must be said that the commitment of the United States to the North Atlantic Treaty and to the structures based on that agreement, along with the military threat to the alliance posed by the forces of the Warsaw Pact, especially in the Central Sector in Europe (essentially the area of responsibility assigned to Allied Forces Central Europe), contributed both to causing and reinforcing the Army Concept. Yet, it is the clarity of the commitment of both the North Atlantic and Warsaw alliances to the maintenance of the status quo in Central Europe and the mutual commitment of forces in and to that theater that make interalliance war there unlikely. Ironically, one hopes not tragically, additional or new commitments of U.S. military forces and all of the actual combat over the next decade or two are likely to occur *outside* Central Europe.

It is here that the relevance of Dr. Krepinevich's book comes to the fore. He shows us how little the U.S. Army as an institution anticipated and prepared for the kind of war it found itself engaged in in mainland Southeast Asia and, what is most important, how little impact that long engagement had on the doctrine controlling the way in which the Army prepares for future engagements outside Central Europe. To be sure, the establishment of Delta forces and the (re-)creation of Ranger and regionally oriented Special Forces formations do provide some capability to intervene in so-called extra-European, special cases. Similarly, the organization of "light" divisions could contribute to a capability to engage in what we now call low-intensity conflict. However, without some major changes in doctrine and training, one may be permitted to question the efficacy of organizational fix. One might add that the lack of agreement on the definition of what low-intensity conflict may be could be as much a reflection of doctrinal blindness or confusion as anything else—presently the term tends to mean whatever the user wants it to mean.

Dr. Krepinevich illuminates both the dangers that accompany the process of doctrine becoming dogma and, worse, when such tactical dogma influences the predominance of methodism in the campaign and in strategy. Just as Capt. (now Maj.) Timothy T. Lupfer demonstrated some years ago, in his splendid little study "The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War,"[2] the doctrinal flexibility of the German army at the tactical level in the face of the realities of war on the western front in World War I, Dr. Krepinevich here demonstrates the doctrinal rigidity at all levels of the U.S. Army in the face of its experience of the last thirty-five years and, what is more serious, its lack of doctrinal preparedness or its failure to break the shackles of methodism for the future.

Dr. Krepinevich refrains from prescribing any simple solution to the syndrome he describes and analyzes with such clarity. Perhaps he is unwilling to venture from what he knows and understands so well into the uncharted. He does, however, give us much to think about if we wish to ponder the uncertainties as well as the probabilities that may arise in the campaigns of the coming decades.

Foreword by Colonel George K. Osborn III

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1 Col. Harry Summers, *On Strategy* (Novato, Calif.: Presidio Press, 1982), 1.

2 Leavenworth Papers, No. 4 (Fort Leavenworth, Kans.: U.S. Army Command and General Staff College, July 1981).

The Strategy of Attrition

With the deployment of American combat troops to South Vietnam in large numbers, the Army applied the doctrine and force structure it had developed for conventional contingencies in Europe and Korea against insurgent forces practicing a form of revolutionary warfare. The lack of progress in defeating the insurgents during the period 1965–68 can be attributed, in part, to an Army strategy reflecting traditional methods of operation in a conflict that was dramatically different from its wars over the previous half-century. Deeply embedded in the service's psyche, conventional operations held sway over the Army even as its civilian superiors lost faith in their effectiveness for counterinsurgency operations.

In a sense, simple attrition of insurgent forces and support systems was a natural strategy for MACV to pursue. It emphasized the Army's strong suits in firepower and strategic mobility and offered the prospect of minimizing U.S. casualties. The Army, being denied the opportunity to win a decisive battle of annihilation by invading North Vietnam, found the attrition strategy best fit the kind of war it had prepared to fight.

Basically, a strategy of attrition offered the Army the prospect of winning the war quickly, or at least more quickly than with traditional counterinsurgency operations, which promised to be long and drawn out. Attrition is a product of the American way of war: spend lavishly on munitions, materiel, and technology to save lives. How many citizens or governmental and military leaders would (or could) choose the other side of the coin? U.S. military leaders believed in the morale-raising and life-saving value of massive firepower whose success they had witnessed in World War II and Korea.

An attrition strategy was a natural outgrowth of the force structure and doctrine developed by the Army. Units deployed to Vietnam in the summer of 1965 were not the Special Warfare task forces that the Army purportedly had formed for counterinsurgency contingencies but heavy units trained and equipped for mid-intensity warfare. As one general put it, "The infantry divisions of the Army were very, very heavy and difficult to deploy and . . . had limited mobility if they weren't in an area where there were roads." The Army, said General Taylor, felt compelled to adopt a strategy of attrition because of the political ground rules that confined the Army's operations within the RVN. If the Army was denied a battle of annihilation through an invasion of North Vietnam, then attrition was the closest approximation available.

Some have stated that the strategy of attrition was not a strategy at all but actually reflected the absence of one. The sheer weight of American materiel and resources seemed sufficient to the military leadership to wear down the North Vietnamese and their VC allies; thus, strategy was not necessary. All that was needed was efficient application of firepower. It had worked against the

Japanese and the Germans in World War II and against the Chinese in Korea. It would be tried again in Vietnam.

Initially, the Army had an open field in deciding how the war in South Vietnam would be fought. The president, concerned primarily with keeping the war contained, focused his attention on the bombing campaign against the North. So long as MACV restricted its operations to South Vietnam proper, interference would be minimal. McNamara, feeling that his expertise did not measure up to that of the Joint Chiefs, was similarly reluctant to get involved.

Westmoreland's proposed strategy envisioned a three-phase process culminating in the destruction of all insurgent forces and base areas by the end of 1967. Phase I would see the stabilization of the situation by the end of 1965 using the 44-battalion commitment; phase 2 involved the 24-battalion add-on projected for 1966 and called for "the resumption of the offensive"; phase 3 was viewed as a mop-up period in which remaining insurgent forces would be eliminated. Westmoreland recalled that he "came up with the concept of leveling off our buildup to achieve a well-balanced, hard-hitting force designed to fight in sustained combat and just grind away against the enemy on a sustained basis—something [the enemy] was not capable of doing, since he didn't have the logistics."

Westmoreland explicitly rejected the alternative of paying less attention to the enemy's big units and breaking down U.S. units into smaller groups to concentrate on pacification. His position was rooted in the military operations conducted by the VC in November 1964, when they mounted a limited offensive in Binh Dinh Province. In their attacks, two VC regiments defeated a number of smaller ARVN units engaged in pacification operations. Speaking of this defeat in detail, Westmoreland maintained that "it was a lesson long to be remembered." He cited it as an example, saying that if he broke any U.S. forces down to engage in pacification, they would suffer the same fate. Yet the incident was more a rationalization for the big- unit operations favored by MACV than an objective lesson against the perils of maintaining insufficient quick-reaction reserves, the real cause of the ARVN's November debacle. That MACV possessed these quick-reaction units in the form of its airmobile forces and thus could afford to concentrate heavily on pacification was a point that was lost on the MACV Staff and their superiors.

Westmoreland's approach was seconded by the chairman of the Joint Chiefs, General Earle Wheeler. As Wheeler saw it, "the ground operations in the South would increase the communists' consumption and the bombing would reduce [their] supply." MACV simply developed a strategy to suit the Army's preferred *modus operandi*, force structure, and doctrine. According to Westmoreland, "Superior American firepower would be most advantageously employed against the big units, and using it in remote regions would mean fewer civilian casualties and less damage to built-up areas." Again General Wheeler agreed, contending that U.S. combat power and mobility "will enable us to find the enemy more often, fix him more firmly when we find him, and defeat him when we fight him . . . our objective will be to keep the combat tempo at such a rate that the Viet Cong will be unable to take the time to recuperate or regain their balance." It was Harkins's old Plan Explosion all over again. This approach, Wheeler concluded, "provides a strategy which, in my opinion, gives the best assurance of military victory in South Vietnam."

Westmoreland, like Taylor, argued that given the geographical limitations involved, there was no alternative to attrition. He claimed that population security could not be provided if the enemy's big units were at large. When it was pointed out that 90 percent of the country's population lived along the narrow coastal plain and in the Delta and that VC battalions in the remote, sparsely populated Highlands would be isolated from the people, Westmoreland demurred, contending that "it was not enough merely to contain the big units. They had to be pounded with artillery and bombs and eventually brought to battle on the ground if they were not forever to remain a threat."

This was essential if the Army's strategy of attrition was to succeed. Yet Westmoreland himself revealed the fatal flaw in this strategy. What if the enemy's big units refused to fight? What if they continued to wage an insurgency in the traditional sense, with the people, instead of the opponent's military forces being the objective? The general conceded that "unlike the guerrillas, if we avoided battle, we could never succeed. We could never destroy the big units by leaving them alone." Yet *the guerrillas avoided battle* and drew the Americans away from the population. As Westmoreland later admitted, "From the first the primary emphasis of the North Vietnamese focused on the Central Highlands and the central coastal provinces, with the basic end of drawing American units into remote areas and thereby facilitating control of the population in the lowlands." By focusing on population control, Westmoreland might have forced the guerrillas to come to him. As things turned out, the Army would neither secure the population nor get its decisive battles with the insurgents.

Furthermore, either out of organizational hubris or slavishness to the Concept (or both), COMUSMACV ignored the lack of success of previous search-and-destroy operations. Even in the recent quasi-phase 3 period of the insurgency they had proved largely ineffective, as found in a MACV staff report submitted in March 1965 which found that ARVN search-and-destroy operations frequently "failed to establish any contact with major VC units." Despite the ARVN's shortcomings, the report concluded, "the ability of the VC to break contact and 'disappear' from view does not depend upon luck or some special technique" but on the inherent advantages that accrued to skilled insurgent forces.

For Westmoreland, this process of fitting the war to the Concept led to his perception of the insurgency as somewhat akin to a previous war in which standard Army operations had prevailed. As he saw it: "Vietnam was a war of movement, an area war. It was somewhat analogous to the [American] Civil War. There were certain troops in static positions, around base areas and airfields but other than that it was a war of movement. Instead of having a horse, as was the case in the Civil War, we had the helicopter. It was a war of fluid situations.

It was impossible for us to seize and hold terrain after seizing it because we didn't have the troops.... You 'homed' on the enemy as in the Civil War and tried to bring the enemy to combat. Once you've done that, then you regroup, move, and continue to try and find the enemy and force him to combat."

The result of viewing the war through the perceptual lens of the Concept was the perpetuation of search-and-destroy operations from the advisory era into the period of intervention. While men like Sir Robert Thompson argued for concentrating on the local guerrilla forces, which provided sustenance to the VC's main-force units, MACV claimed that it was the other way around—the big units were supporting the local guerrillas. Not only did the Army's assertion turn insurgency doctrine on its head but it was untrue. A Pentagon study conducted in 1966, when VC forces were even larger than in the previous year, estimated that VC support requirements from outside South Vietnam totaled *only twelve tons per day!* Obviously, the bulk of insurgent support was provided from *within* the RVN. The Army leadership, however, refused to acknowledge this. There was no questioning of Westmoreland's approach by the Army brass back in Washington; both Wheeler and Harold Johnson were in agreement with the commander in the field. The JCS also supported the Army's approach. In JCS Memorandum 652–65, dated 27 August, the Chiefs called for increased pressure on the North and seizing the initiative as posited by COMUSMACV in the South. This was followed by JCS Memorandum 811–65, dated 10 November, in which the Chiefs visualized the use of U.S. ground forces as providing "heavy assault strength against VC forces and bases" in search-and-destroy operations. The ARVN was to be consigned to the unglamorous duty of population security, a role in which they had demonstrated considerable ineptitude in the past. Thus the Army left counterinsurgency to the RVNAF, while U.S. commanders went out in search of the big battles.

The Chiefs appeared to have cause for satisfaction over their endorsement of MACV's strategy when, shortly after the forwarding of their memo, Army forces defeated the Communists in a major battle in the Ia Drang Valley.

The Ia Drang Valley and Validation of the Concept

While the attrition strategy was formulated in the summer of 1965, U.S. ground forces continued arriving in South Vietnam: two Army brigades in July, followed by a corps headquarters. A Marine regiment landed in August, and by the end of September the entire 1st Air Cavalry Division had been deployed to the Central Highlands. The remainder of the 1st Infantry Division was deployed by 7 October, and, finally, an entire ROK division was in-country on 8 November. U.S. strength at that time stood at 184,314 men. The pride of the U.S. forces, however, was the Army's 1st Cavalry Division. It was deployed as the Army had wanted, to the Central Highlands, where insurgent strength was most formidable.

On 14 November elements of the 1st Cavalry encountered regimental-size formations of North Vietnamese in the Ia Drang Valley. The ensuing battle was both bloody and savage, with the Communists suffering over 1,200 killed, while U.S. losses exceeded 200. To General Westmoreland and the MACV Staff (particularly his G-3, Gen. William Depuy) the Ia Drang Valley campaign represented the successful application of the attrition strategy. Here were large enemy formations willing to go toe to toe with the Americans, and their big units were being smashed by the Army's firepower and high-tech mobility. Standard operations were working; therefore, no alternative strategies need be explored. No more feedback was required for MACV save the body counts that measured the attrition strategy's progress. For Westmoreland, "the ability of the Americans to meet and defeat the best troops the enemy could put on the field of battle was once more demonstrated beyond any possible doubt, as was the validity of the Army's airmobile concept." General Johnson felt that "the worst was behind us."

Indeed, from this point on, the Army began to discard any reluctance that it had concerning the deployment of heavy forces, such as armor. Whereas Westmoreland had originally questioned the utility of deploying armored formations in a low-intensity conflict environment, this soon gave way to a feeling of enthusiasm toward the use of tanks against insurgents. As early as the beginning of 1966 the Army Staff in Washington was pressing MACV to accept the new Sheridan tank for use in the RVN. By then the M48 Patton tank had already been deployed with the 1st Infantry Division to test the effectiveness of armor against insurgents. Westmoreland's initial resistance to armor was overcome primarily by its ability to provide the firepower that he felt needed for his strategy of attrition. Armor had the additional advantage, from the Army's point of view, of allowing mechanized infantry to fight mounted, employing their armored personnel carriers (APCs) or tanks as assault vehicles in closing with destroying the enemy. Of course, it was not very difficult for VC to determine when an armored unit was trying to close on them; thus, the American tanks were easily avoided. Often, APCs and tanks were employed in "jungle busting," plodding nods ahead of the infantry, clearing a path through the jungle and setting off mines and booby traps. One disillusioned colonel remarked, "I saw personally only one example of jungle-busting: four kilometers progress in 16 hours by a troop and attached rifle company. The costs in maintenance (then and later) certainly outweighed the knowledge that a serpentine jungle path a few feet wide might have been temporarily freed of VC."

The use of armored formations went against many principle of classical counterinsurgency doctrine. Armored units rarely operated at night, when the guerrillas were most active; they allowed for easy evasion of U.S. forces by the guerrillas; they encouraged the infantry to operate "buttoned up" inside their vehicles instead of out on patrol; they were "maintenance-intensive" pieces of equipment, requiring large numbers of support troops, who did not actively participate in operations; and finally, compared with the infantry, they were grossly indiscriminate in the application of firepower. In short, they were a blunt instrument for combating insurgency—save in its most advanced stages—but quite appropriate to the Army's notion of how wars should be fought.

A further addition to the Army's arsenal of firepower was the air support provided by tactical fighters and helicopters. The rationale for the lavish application of such firepower (and, in the case of the helicopter, additional mobility) was not for counterinsurgency operations but to support the Army's strategy of attrition. All this firepower and mobility, claimed General Wheeler, made traditional concerns relating to counterinsurgency inoperative: "These two air weapons—helicopters and fighter bombers— provide to South Vietnamese and to US forces an advantage in mobility and firepower—the fundamentals of combat—greatly exceeding that available to counterinsurgency forces in any other guerrilla war. Frankly, I do not know what is the required ratio of government to guerrilla forces in order for the government to prevail. I do know that it is not eight or ten-to-one in South Vietnam because we can achieve the preponderance of force required with less than that ratio."

Despite the general's confidence in the Army's attrition strategy, students of insurgency warfare were uneasy over this radical departure from classical counterinsurgency strategy. Sir Robert Thompson, in evaluating the Army's approach to the insurgency, stated, "The major criticism I had tactically in Vietnam was that the one element in which you [the Army] were never mobile was on your feet. You got landed from helicopters and the battle took place, but when the battle was over and you had won the battle, you even went out by helicopter. No one ever walked out. Now the enemy, who was mobile on his feet, could actually decide whether he was going to have a battle with you in the first place, and he could break it off whenever he wanted to." Thompson felt that victory could be achieved only through a long process involving the denial of enemy access to the people through intensive ambushing and patrolling in and around the populated areas and by the use of long-range patrols to harass the guerrillas in more remote areas. Sooner or later the VC, denied access to their primary source of supply, the population, would have to come out in the open and contest the government's control of the people. At that point the insurgent main forces could be defeated. Barring a gross error in judgment on the part of the insurgents, however, annihilation of the VC's main units would not happen before these conditions occurred. By adopting a strategy of attrition, the Army placed the VC in the position of merely having to survive in order to prevail.

Strategic approaches such as Thompson's did not gain a receptive ear within the Army, even as it became apparent to many civilian observers that the Army Concept was inappropriate for insurgency conflict. General Williams, author of the McNamara directive that gave birth to Army air mobility, recalled a discussion with an American correspondent while in Vietnam:

> Sitting and talking to him, he made the charge. He said, "You are doing more in your helicopters to prevent our side from winning this war than anyone else." I said, "How's that?" He said, "Well, let me illustrate it this way. Everybody agrees that this is a war for the hearts and minds of the people. How do you expect our forces to win the hearts and minds of the people when all they do is take off from one Army base and fly overhead at 1500 feet while Charlie is sitting down there and he's got 'em by the testicles jerking, and every time he jerks their hearts and minds follow. Now, until the Americans are willing to get down there with Charlie, he's got their hearts and minds."

Reflecting upon this, General Williams agreed that "if you really want to be cost-effective, you have to fight the war the way the VC fought it. You have to fight it down in the muck and in the mud and at night, and on a day-to-day basis." Yet, the general told the correspondent, "that's not the American way, and you are not going to get the American soldier to fight that way."

Although Williams felt that a true counterinsurgency strategy was not possible, junior officers in Vietnam, less indoctrinated in the ways of the Concept, were more inclined to support it. On a trip to Vietnam in December 1965, after supper one night General Johnson engaged in a gab session with lieutenants and captains of the 1st Infantry Division. The discussion quickly turned to strategy and tactics. The young platoon leaders and company commanders told the Chief of Staff that they could not engage the enemy if they were moving around in big outfits. What was needed, they said, was to operate in many small units, constantly moving and patrolling. Although Johnson "agreed with their philosophy," he rejected their ideas, since "we [the Army] were not going to be able to respond to the public outcry in the United States about [the] casualties" that might result.

There was, however, one segment of the American ground forces in South Vietnam that opted for a close approximation of traditional counterinsurgency strategy. These combat units did not belong to the Army but were U.S. Marine units deployed in I Corps. As Sir Robert Thompson pointed out, "Of all the United States forces the Marine Corps alone made a serious attempt to achieve permanent and lasting results in their tactical area of responsibility by seeking to protect the rural population."

Combined Action Platoons (CAPs): A Marine Challenge to the Concept

The Marine approach to counterinsurgency in Vietnam had its roots in the heritage of the service. A history of Marine participation in small wars had given them a background in the type of conflict environment they faced in South Vietnam. As early as 1940 the Marines had put out a manual on small wars which stated:

> In regular warfare, the responsible officers simply strive to attain a method of producing the maximum physical effect with the force at their disposal. In small wars, the goal is to gain decisive results with the least application of force and the consequent minimum loss of life. The end aim is the social, economic, and political development of the people subsequent to the military defeat of the enemy insurgent. In small wars, tolerance, sympathy, and kindness should be the keynote of our relationship with the mass of the population.

Once the Marines arrived in South Vietnam, they put their doctrine into practice. General Lewis Walt, commander of the Marine forces under COMUSMACV, issued orders for all Marine combat units to conduct vigorous patrols and ambushes from sundown to sunup, when insurgent activity was greatest. Walt issued stringent orders regarding the application of firepower, keeping it to an absolute minimum. Reflective of the manner in which the Marines viewed the conflict was a story told by General Walt of some Marines who came upon an old woman mining a road used by U.S. forces. They discovered that the woman harbored no particular hatred toward Americans. She planted the mines because the VC threatened to kill her granddaughter, the only surviving member of her family, if she refused. Since neither the Marines nor the Saigon regime protected her from this form of revolutionary "justice," observed Walt, he could hardly condemn her actions.

Although it would have been easy for the Marines to vent their frustration against the victims of insurgent coercion, Walt realized that that would only be playing into the enemy's hands. If the Marines were going to succeed, they would have to get close to the people and provide them with security from communist intimidation. Therefore, rather than hopping around in airmobile search-and-destroy operations or use helicopters for movement and logistical support, the Marines relied on the same roads used by the population. Walt observed that the Marines "could have depended almost entirely on sealift and airlift between major points on the north-south road through our area, but like many other things in Vietnam, the purely military consideration was never fully adequate. It was important that the roads be kept open for the people as well as for ourselves."

The Marine approach to counterinsurgency was further refined through the efforts of Captain Jim Cooper, commander of a Marine company operating near the Vietnamese town of Chulai. After a period in which his unit conducted repeated sweeps, patrols, and attempted ambushes, Cooper became frustrated at his inability to separate the guerrillas from the population in the hamlet of Thanh My Trung. He decided to deploy his Marines inside the hamlet and announced that henceforth the people would be protected from the VC, for he had come to stay. Cooper increased the number of night patrols and ambushes and brought the villages' paramilitary Popular Forces (PF) unit under his wing, gradually making the local force assume a greater share of responsibility for village security. Before long the PFs, along with the Marines, were engaged in continuous night patrols in the area immediately surrounding the village, stalking the VC, setting ambushes, disrupting the insurgents' plans and activities. The result was the VC's abandonment of the village.

It did not take long for CAPs to catch on with the Marines. By 1966 there were fifty-seven such units in I Corps, and the number expanded to seventy-nine in 1967. As it worked out, each CAP consisted of fifteen marines and 34 PFs living in one particular village or hamlet. Their mission called for giving high priority to the traditional elements of counterinsurgency strategy: destruction of the insurgent infrastructure, protection of the people and the government infrastructure, organization of local intelligence nets, and training of the PFs. If CAPs suffered from problems, they centered on the language barrier between the Americans and their Vietnamese counterparts and the failure of the Marine Corps leadership to arrange the CAPs to provide for an interlocking network of units that would conform to the "oil spot" principle.

The CAPs produced results, but like all successful counterinsurgency programs, it took time. By the summer of 1967 a DOD report noted that the Hamlet Evaluation System (HES) security score gave CAP-protected villages a score of 2.95 out of a possible 5.0 maximum, as compared with an average of 1.6 for all I Corps villages. Furthermore, there was a direct correlation between the time a CAP stayed in a village and the degree of security achieved, with CAP-protected villages progressing twice as fast as those occupied by the PFs alone.

All this was achieved at a casualty rate *lower* than that found in units operating in search-and-destroy missions. General Richard Clutterbuck, a British counterinsurgency expert, noted that "although [Marine] casualties are high, they are only 50% of the casualties of the normal infantry or marine battalions being flown around by helicopters on large scale operations." Thus, the actual data on casualties belied Army concerns that such operations produced intolerably high American losses.

The Marines also initiated a program called GOLDEN FLEECE, which was rooted in traditional counterinsurgency doctrine. It invoked saturating coastal farming areas with Marine guards and patrols during the harvest season so that the farmers could harvest, store, and eventually sell their crop free from VC taxation. Although the VC fought the system, they were no longer the fish swimming in a sea of cooperative people. They instructed the farmers to let the food rot in the fields or risk reprisals. When the farmers, emboldened by the long-term presence of the Marines and their assurance that they had come to stay, went ahead with the harvest, the VC tried to make good their threat, first attacking in small patrols but eventually moving up to battalion-size assaults. Each time, the Marines, assisted by local paramilitary units, beat them back. "Each catty of rice," wrote General Walt, "not going into Viet Cong bins meant that another catty had to be grown in North Vietnam and brought over the hundreds of miles of mountain trail by human bearers."

Even though only a small percentage of the total Marine force in South Vietnam was utilized in these operations (a mere ten companies were involved in the CAP program during 1967), the results were impressive. Sir Robert Thompson noted that "the use of CAPs is quite the best idea I have seen in Vietnam, and it worked superbly." At the same time, DOD survey teams observing the operations of CAPs went away concluding that then current Army training simulations (the "Vietnam villages") were "not by any means representative of real situations."

The Army's reaction to the CAP program was ill-disguised disappointment, if not outright disapproval, from the top down. General Harry Kinnard was "absolutely disgusted" with the Marines. "I did everything I could to drag them out," he said, "and get them to fight.... They just wouldn't play. They just *would not play.* They don't know how to fight on land, particularly against guerrillas." Major General Depuy observed sarcastically that "the Marines came in and just sat down and didn't do anything. They were involved in counterinsurgency of the deliberate, mild sort."

Brigadier General Hunt of Great Britain, an expert on insurgency warfare, recounted his experience with the Army on one of his trips to I Corps: "The Marines had never been able to sell the idea of CAPs to the rest of the Americans [i.e., the Army]. It was only in the north where the CAPs were operating, and when I went down to MACV and referred to this [limitation of the program], they said that I had been fixed by the Marines—brainwashed! They did not agree and in any case said it would be too expensive. [They did not realize that] when you get an RF or PF man out in the village he is like the chicken's neck; he is in an extremely dangerous position. You have to make it clear to him that he is going to be supported if there is need."

General Westmoreland was particularly upset over the Marines' use of CAPs, challenging as they did the concept of operations that he had drawn up. He stated in his memoirs that "they were assiduously [sic] combing the countryside within the beachheads, trying to establish firm control in hamlets and villages, and planning to expand the beachhead gradually up and down the coast.... Yet the practice left the enemy free to come and go as he pleased throughout the bulk of the region and, when and where he chose, to attack the periphery of the beachheads." Westmoreland did not realize that the Marines were operating in the densely populated areas, leaving the VC little to recruit or exploit in the remote, largely uninhabited region they controlled. Furthermore, through long-range STINGRAY patrols, the Marines gained intelligence on the movements of large insurgent forces close to the populated areas. The efficacy of the Marine approach is borne out by the results: throughout the history of the program only *one* CAP was ever overrun.

Westmoreland later conceded that the Marines achieved some "noteworthy results," but he continued to defend the Army approach, claiming that he "simply had not enough numbers to put a squad of Americans in every village and hamlet." This was not supported by the facts. First, it was not necessary to place army squads in *every* village simultaneously; indeed, the "oil spot" principle called for gradual expansion outward from selected areas. Westmoreland's argument is more reflective of the Army's impatience for quick results in a conflict environment that would not produce them.

Second, even if encadrement of every village and hamlet had been the requirement, a 1967 DOD report found that it could be met by utilizing 167,000 U.S. troops, far fewer than the 550,000 eventually assigned to South Vietnam. Some argue that of the 550,000 only about 80,000 represented the "foxhole strength" of American forces, that is, those men actually involved in the fighting. The counterargument, of course, is that the force mix was grossly overweighted in favor of support personnel necessary to maintain the firepower-intensive U.S. forces deployed in South Vietnam. Tanks, APCs and helicopters require considerable numbers of maintenance support personnel, along with a large logistical tail of soldiers to keep the flow of spare parts and munitions moving. Light infantry units, on the other hand, require far fewer support troops, enabling a greater percentage of soldiers to participate in the actual fighting. Such light infantry units, however, were few and far between in the heavy, firepower-oriented force structure of the Army. To strip down the ROAD divisions to fight a light infantry war would have required the Army to go against everything it had worked for during the lean years of the Eisenhower administration.

Given a 550,000-man ceiling, a force mix providing for CAP operations could have been effected, with several airmobile or ROAD divisions held in reserve to counter any large-scale VC/NVA incursions into areas undergoing pacification. Casualties would have been minimized, and population security enhanced.

While Westmoreland was just as disgusted as Depuy with the Marines' approach to the war, he realized that the carrot would work better than the stick in moving them toward MACV's strategic approach to the conflict. The marines, after all, were not a part of the Army; furthermore, if they wanted, they could drag their feet in complying with MACV directives or seek support from the

Navy in resisting the Army's intrusion into their operations. Therefore, Westmoreland, with Depuy's help, wrote General Walt a note in an effort to persuade the Marines to conform to the Army strategy. In it, Westmoreland told Walt that he was "impressed with the professional competence of all echelons and with the grasp which your officers and men display regarding the problems of long term security and pacification." He was concerned, however, "about the situation throughout the part of I Corps which lies beyond the three Marine enclaves. Outside your enclaves the VC are largely able to move at will and they are rapidly consolidating very large areas.... The longer the VC have a free hand in the rest of the Corps, the more area they will consolidate, and the more difficult it will be for us in the long run.... Therefore, I believe very strongly that we must . . . seek out and destroy large VC forces." The discussion focused on consolidation of terrain, not the population. In any event, the purpose of search-and-destroy operations was not to occupy territory but to engage in battle.

MACV did initiate an Army version of CAP involving mobile training teams (MTTs). This approach involved four-man Army teams and an ARVN officer working with village paramilitary forces for about a month and then moving on. The program reflected the Army's quick-fix approach to counterinsurgency and its desire for quick results. Four men providing hamlet security for one month was hardly the same as thirteen men involved over a prolonged period of time. The Army would not accept the fact that getting people to believe you were going to protect them required an effective government security force that was always going to be there, as well as a lot of time and resources. Counterinsurgency on the cheap would not work.

It must be said, however, that the Army succeeded in meeting the challenge to its preferred strategy that CAPs represented. In the end, the Marine CAP program remained limited, despite its demonstrated effectiveness. The bulk of Marine forces in I Corps remained involved in border surveillance and interdiction operations, one example being the Marine base at Khe Sanh.

How Much Is Enough? (Revisited)

For its chosen strategy to work, the Army gambled that it could attrit insurgent forces faster than the enemy could replace them, either by infiltration from the North or by recruitment within the South. In opting for this approach, the Army wagered that a strategy playing to its strong suits instead of the insurgents' weak points would be enough to provide victory.

The key to success in this strategic approach was forcing the VC and the NVA to fight. Having eschewed the traditional approach of having the insurgents fight to maintain access to the population, the Army relied on its technological and logistical strong suits—it would use sensors, infrared photography, helicopters, and a host of technological wonders to find the enemy, and firepower and mobility to destroy him. The Communists, however, had been and would continue to be successful in dictating the tempo of operations and, therefore, their level of casualties as well. The Army, faced with the potential bankruptcy of its strategy, responded, not by abandoning it, but by insisting, as it had during the advisory years, that the only necessary change was an increase in the scope and intensity of operations.

It became evident quite early on that the insurgents would stick to their strategy of protracted conflict: drawing U.S. units away from the populated areas to allow continued access to their logistical base (the population); generating U.S. casualties to attrit the will of the United States to continue the war; keeping U.S. forces in remote, static positions when possible (Khe Sanh, for example) to inhibit their operational effectiveness; and deploying sufficient NVA forces to entice the Army away from populated areas.

Evidence of the insurgents' strategic continuity was present early in the Army's intervention phase in Vietnam. It will be recalled that COMUSMACV authorized the 173d Airborne Brigade to participate in search-and-destroy operations in the Iron Triangle, a Communist redoubt northwest of Saigon, in late June, before the final decision was made on the 44-battalion request. During the three-day operation the brigade failed to make any significant contact with the enemy, although the unit was sweeping through an area long recognized as a VC stronghold.

A little over three months later the 173d was again involved in search-and-destroy operations in the Iron Triangle, this time from 8 to 14 October. The after-action report submitted by the brigade indicated that the VC were avoiding U.S. forces and were retreating into Phase 2 guerrilla warfare rather than slugging it out with the Americans in Phase 3-type operations. Nevertheless, Brigadier General Williamson, the 173d's commander, wrote that his unit had "torn apart" the Iron Triangle and destroyed "all enemy troops." The unit claimed forty-four enemy killed. Yet within a year the Army was again trying to clear the area of VC. Ignoring the implications of operations such as these, MACV chose to rest its estimate of enemy intentions on the victory of the 1st Cavalry in the Ia Drang Valley.

By late November MACV realized that the force ratios that the Army had creatively arrived at earlier did not reflect the true situation. On 23 November, Westmoreland notified the JCS that "the VC/PAVN buildup rate is predicted to be double that of US Phase II forces [now the 28-battalion add-on]." The increase in enemy forces would leave the allied forces with a ratio of only 2. 1:1 in "battalion equivalents" by the end of 1966. Rather than reevaluate the strategy of attrition, MACV forwarded a request for an additional 41,500 troops, raising Army Phase II deployments to 154,000 men, for a total of nearly

375,000 by mid-1967. Meanwhile, the myth that the insurgents' main-force units were the principal source of support for local guerrilla forces persisted.

Despite the victory in the battle of the Ia Drang Valley, Westmoreland quickly realized that his attrition strategy would take time and the infusion of large numbers of U.S. troops to reach the *crossover point*, the point where the enemy's losses in battle would exceed his capability to replace them. At a high-level conference in Honolulu from 7 to 9 February, William Bundy and John McNaughton drafted a program for increased U.S. forces for South Vietnam. While President Johnson and Prime Minister Ky were involved in their meetings the program was ironed out at Camp Smith by Westmoreland, Wheeler, Admiral Sharp, the CINCPAC, Bundy, and McNaughton.

Reacting to the president's exhortation to "nail the coonskin to the wall" in South Vietnam, the plan called for U.S. troop levels to be increased from 184,300 at the close of 1965 to some 429,000 by the end of 1966. The number of U.S. maneuver battalions would jump from 35 to 79. The intent was to more than double the rate of U.S. offensive operations, and primary emphasis was placed on achieving that objective, as opposed to pacification. The goal was to reach the crossover point by year's end.

In March McNamara authorized JCS planning for deployment of the additional forces, with their deployment stretched out through mid-1967 to avoid a callup of the reserves. On 11 April McNamara approved, with minor exceptions, the deployment plan proposed; there would be seventy U.S. maneuver battalions in the RVN by year's end, and the remaining nine would be deployed by June 1967. Thus, between July 1965 and the Honolulu Conference, Westmoreland upped the number of maneuver battalions required to do this job from fifty-eight (the number called for in the 24-battalion add-on) to seventy-nine.

In fact, the Army was pushing for an increase not only in the intensity of the war but in its scope as well. The JCS felt that the president "was not doing enough" and advocated carrying the war into the insurgent sanctuaries in Laos and Cambodia, if not North Vietnam itself. General Johnson supported an operation into Laos to cut the Ho Chi Minh Trail, as did General Westmoreland, and in early 1966 MACV developed plans for such a maneuver. The desire to expand the war was largely the result of impatience and frustration on the part of many senior officers at their inability to force the enemy to stand and fight. Lieutenant General Kinnard, commander of the 1st Cavalry Division, expressed the views of most of his contemporaries when he said, "We were fighting their kind of war , and I wanted to make them fight our kind of war. I wanted to turn it into a conventional war—boundaries—and here we go, and what are you going to do to stop us?"

The initial plan, EL PASO 1, saw the 1st Cavalry Division establishing an airhead on the Bolovens Plateau in the Laotian panhandle, supported by one incursion by the 3d Marine Division pushing west from Quang Tri Province and another by the 4th Infantry Division driving up from the Central Highlands. Here again the Army was falling back on old, familiar plans and ideas. General Johnson had commissioned a study in March 1965 to determine the feasibility of such an operation. As it turned out, it was not feasible. Westmoreland's airhead was basically something that had been advanced during the Laotian crisis in 1961–62. MACV, however, was continually frustrated in its efforts to win presidential approval for the operation.

Rejection of the plan notwithstanding, the attrition strategy persisted; during the last five months of 1966, MACV invested 95 percent of its combat battalion resources in search-and-destroy operations. Westmoreland recalled one typical operation: "I called on the 1st Brigade, 101st Airborne Division, under Brigadier General Willard Pearson to join the search and later the entire 1st Cavalry Division, commanded by Major General Jack Norton. Patrolling relentlessly through the trackless jungle, catapulting from one hastily built hilltop firepower support base to another, those units through the summer killed close to 2,000 of the enemy; when the cavalry division returned for another sweep in October, a thousand more of the enemy would never make it into the populated region." Unfortunately, the enemy *already was* in the populated regions. While the Army chased its elusive quarry through the country's interior the insurgents continued operating along the densely populated Coastal Plains. Over half of all significant contact with Communist forces in the first half of 1966 took place, not in the interior regions, but along the Coastal Plains. The inference was clear: the insurgents would fight to maintain access to the population while leading the Army on a wild-goose chase inland, drawing MACV's maneuver battalions away from the people they were purportedly protecting.

One year after the commitment of U.S. ground forces the Army had made little headway against the enemy. VC forces, numbering 160,000 the year before, now stood at some 220,000, not including some 38,000 NVA troops. It was estimated that the enemy could recruit internally or infiltrate into the RVN the equivalent of fifteen battalions a month. During this period, in March 1966, a study commissioned by General Johnson in July 1965 was completed by the Army Staff. Entitled "Program for the Pacification and Long-Term Development of South Vietnam" (PROVN), it was the product of an eight-month effort of some of the brightest minds on the Army Staff, charged by the Chief of Staff with "developing new sources of action to be taken in South Vietnam by the United States and its allies which will lead in due time to successful accomplishment of US aims and objectives."

The study was not received favorably by the Army leadership, and its conclusions and recommendations make the reasons clear. The authors of the report contended that there was "no unified effective pattern" to the Army's war effort, that the situation in Vietnam had "seriously deteriorated," and that 1966 might be the final opportunity to modify MACV's strategy before victory became impossible. The PROVN group recommended that pacification be given top priority in the war effort. Nevertheless, it stated that "the bulk of US and FWMA [Free World Military Assistance] Forces and designated RVNAF units should be directed against enemy base areas and against their lines of communication in SVN, Laos and Cambodia, as required; the remainder of Allied force assets must assure adequate momentum to activity in priority Rural Construction areas." While PROVN was less than a ringing endorsement for a traditional counterinsurgency strategy, it at least acknowledged the need for direct Army participation in population security programs. PROVN also called for greater efforts to achieve some sort of unity of command and for development of a single, integrated plan for the counterinsurgency forces.

The study was briefed to COMUSMACV on 17 May in Honolulu. Westmoreland contended that most of PROVN's recommendations had been acted on and that the United States could not foist unity of command on the Vietnamese or force adherence to U.S. plan without risking the Saigon regime's being tagged as U.S. puppets. Thus, even though the study allowed for the continuance of current Army operations while the ARVN bore the brunt of pacification, the very notion that the Army had a major obligation to Revolutionary Development, as it was called, made the Army leadership uneasy. Nor was the Army brass thrilled with the idea that the U.S. ambassador (particularly one such as Lodge, with his apparent preference for traditional counterinsurgency doctrine) would set priorities and objectives for the Army.

The upshot of all this furor over PROVN and its recommendations was its suppression by the Army. The document was downgraded from a study to a "conceptual document," in no way binding on MACV or the Army; furthermore, for a period after its completion Army officers were forbidden to discuss the study, or even acknowledge its existence, outside DOD. Despite Westmoreland's claims that MACV had responded to the PROVN study, the second half of 1966 saw MACV utilize its maneuver battalions almost exclusively in search-and-destroy operations.

Evidence of PROVN's negligible impact is found in another Army study completed in May 1967, entitled "Review and Analysis of the Evaluation of the US Army Mechanized and Armor Combat Operations in Vietnam" (MACOV). Prepared by CDC, the evaluation found that "approximately 25% of all operations are security or minor pacification missions, and approximately 75% are search and destroy." Furthermore, "of 170 battalion task force size US initiated offensive operations by armor-mech units examined in the study, only one (0.59%) took place at night.... Of 509 company team size similar operations, fourteen took place at night (2.75%)."

While the Army might have been successful in side-stepping the implications of the PROVN study, it had less luck with the civilians at OSD, where doubt and concern over the Army strategy for winning the war began manifesting themselves. On 18 June CINCPAC forwarded MACV's force request for calendar year 1967. Citing the proposed increases as "rounding out forces," the request called for U.S. strength in the RVN to increase to 90 maneuver battalions and 542,588 personnel. It was received by McNamara on 5 August with the Chiefs' stamp of approval. The secretary of defense balked at approving yet another increase, requesting "a detailed line by line analysis for these requirements to determine that each is truly essential to the carrying out of our war plan." McNamara included in his memo to the JCS issue papers prepared by the Whiz Kids at Systems Analysis (OSA) questioning the need for additional troops.

On 10 August Westmoreland bluntly notified his superiors, "I cannot justify a reduction in requirements submitted." Given the strategy he had adopted, COMUSMACV was correct. The JCS labored over the objections presented by Alain Enthoven and the people at Systems Analysis and forwarded their defense on 24 September. Enthoven remained unpersuaded. The JCS had cut over half of the 70,000 slots to which OSA had objected, but this still left projected U.S. force levels at some 20,000 over the limits in OSA's Program 4. Before presenting this contentious issue to the president for a decision, McNamara decided on a trip to South Vietnam for a first hand evaluation of the situation, in the hope of avoiding an open clash between the generals and OSD's civilian brain trust.

McNamara was accompanied on his trip by General Wheeler, Robert Komer (the president's special assistant for pacification), and Assistant Secretary of Defense John McNaughton, among others. The mission arrived in Saigon on 10 October and departed on the 13th. The visit had a sobering effect on McNamara, confirming many of his doubts about the progress of the war. In a pessimistic memorandum to the president the day after his return, McNamara surveyed the situation in South Vietnam. He saw "no reasonable way to bring the war to an end soon [as the enemy] has adopted a strategy of keeping us busy and waiting us out (a strategy of attriting our national will)." Pacification was "a bad disappointment" that had, "if anything, gone backward"; the ROLLING THUNDER bombing campaign had produced insignificant benefits, if any. As for the strategy of attrition, McNamara stated that

> *the one thing demonstrably going for us in Vietnam over the past year has been the large number of enemy killed-in-action resulting from the big military operations. Allowing for possible exaggeration in reports, the enemy must be taking losses—death in and after battle—at the rate of more than 60,000 a year. The infiltration routes would seem to be one-way trails to death for the North Vietnamese. Yet there is no sign of an impending break in enemy morale and it appears that he can more than replace his losses by infiltration from North Vietnam and recruitment in South Vietnam.*

Since the war effort appeared to be going nowhere, McNamara offered some recommendations for improvement. He suggested leveling off U.S. forces at 470,000 and a vigorous pacification effort. McNamara strongly challenged Westmoreland's rationale for search-and-destroy operations in lieu of an emphasis on pacification, contending that "the large-unit operations war, which we know best how to fight and where we have had our successes, is largely irrelevant to pacification as long as we do not lose it."

Finally, McNamara proposed constructing a barrier across the 17th-parallel DMZ dividing the two Vietnams. Some scientists, along with Harvard Law School professor Roger Fisher and John McNaughton, had sold McNamara on the idea of an electronic barrier that could be manned by some 10,000–15,000 troops. The barrier proposal was in some respect a scaled-down version of the Army proposal for eliminating infiltration by moving a four-division blocking force into northern South Vietnam and Laos. The military's reaction to McNamara's idea can best be summed up by the words of former marine officer William Carson, who wrote that "the only way to describe the barrier is to recognize it as just one more 'happening' in the Defense Department's Alice in Wonderland approach to insurgency."

The barrier proved an expensive error in terms of both money and manpower expended. It tied down U.S. troops along the DMZ, subjecting them to harassing fire from VC and NVA forces. The Marines estimated that eighteen engineer battalions would be required on a sustained basis just to build and maintain the necessary access roads if the barrier were to run the entire length of the DMZ. The most interesting aspect about the McNamara Line, however, was that while the military dismissed it as an idiotic civilian fantasy, MACV could still seriously plan for the establishment of an anti-infiltration barrier across the 17th parallel and the Laotian panhandle!

While McNamara staked out his position for stabilized force levels, a strong commitment to pacification, and a barrier across the DMZ, the Joint Chiefs responded rapidly and angrily to his proposals. In a JCS memorandum sent to the president on the same day as McNamara's report, the Chiefs objected to the 470,000-man force level advanced by McNamara, as well as the planned diversion of ARVN forces away from offensive operations into pacification activities, citing the increased burden on U.S. forces that would result.

Despite their disagreement with the McNamara proposals, the chiefs were prepared to yield to pressure from above—but only a little. They maintained that the military situation had "improved substantially over the past year." Thus, they would agree to the use of a "substantial fraction" of the ARVN for pacification purposes, and they recommended that COMUSMACV be placed at the head of the pacification program "to achieve early optimum effectiveness." Several weeks later, after the Manila Conference, the Chiefs recommended that they be allowed to begin "mining ports, [a] naval quarantine, spoiling attacks and raids against the enemy in Cambodia and Laos, and certain special operations [to] support intensified and accelerated revolutionary development and nation building programs." The Chiefs, it seems, just could not get the hang of counterinsurgency warfare.

By early November the military's willingness to accommodate McNamara had filtered down to COMUSMACV's Combined Campaign Plan (CCP) for 1967, issued on 7 November. The plan called for the RVNAF to support pacification with the majority of its forces; however, the ARVN formed only one component of the RVNAF, with the PFs and RFs making up the remainder. The primary mission of the U.S. and FWMA force contingencies would remain the destruction of VC/NVA main forces and base areas through a series of offensives. The emphasis on attrition continued. As General Taylor explained, the CCP "had language in it that seemed to indicate Westy's responsibility for clearing the enemy out of every square foot of soil in all [of] South Vietnam and probably accounted for his willingness to engage the enemy in places where terrain and distance to base areas was very favorable to him [the VC]; that is, they were right up against the border. The defense of Khe Sanh seemed to confirm the impression that he felt he had to control those worthless valleys way over there toward Laos."

On 11 November, Program 4, as it was called, was published by OSD. The program provided the military with authorization to increase U.S. force levels in Vietnam to the 470,000 troops Enthoven had recommended to McNamara the previous month. This represented a shortfall of 7 Army maneuver battalions and roughly 53,000 troops requested in the JCS package. Six days later McNamara laid out the reasons for his decision in a Draft Presidential Memorandum (DPM). The significance of the memorandum lies in the concerns voiced by McNamara over the strategy the military was pursuing in Southeast Asia. McNamara felt that the United States had two choices: (1) to continue pouring combat forces into South Vietnam in an effort to reach the elusive crossover point through search-and-destroy operations; or (2) to level off U.S. forces at a point where they could keep the enemy's big units "neutralized," that is, away from the populated regions. McNamara advocated the latter course, arguing that "if MACV estimates of enemy strength are correct, we have not been able to attrite the enemy forces fast enough to break their morale and more US forces are unlikely to do so in the foreseeable future." The secretary of defense supported his decision by citing the inability of MACV to reach the crossover point. The Army, McNamara said, had reached the point of diminishing marginal returns, where the commitment of additional troops had only a negligible impact on the enemy casualty rate.

Thus did the civilians in OSD conclude that the Army's attrition strategy was not working and that its prospects for producing an eventual victory were exceedingly dim. The nonprofessionals, the Whiz Kid analysts whom the Army brass detested so much, were actually out in front on the "learning curve" of what was really transpiring in Vietnam. The Army leadership, burdened by its rigid conceptual approach to the conflict, echoed the familiar refrain: "more of the same." The Chiefs filed a JCS memorandum disputing the force levels set and the secretary of defense's priorities the day following his DPM, but to no avail. In the coming months the Army Concept would come under increasing criticism from civilians in the Defense community, with the Army, as always, promising results if given more resources to grind the enemy down.

As the war moved into 1967, Westmoreland's need for additional forces remained acute. The general believed more than ever that with enemy strength continually on the increase, U.S. forces had to fight in the remote border regions to prevent the Communists from interfering with the pacification program. On 18 March, Westmoreland forwarded a request to the JCS for an increase in U.S. forces of at least 2 1/3 divisions, with 4 2/3 divisions considered an optimal addition to MACV's order of battle. The request saw U.S. troop strength in South Vietnam reaching at least 559,000 (108 maneuver battalions) by mid-1968, with 676,000 men (130 maneuver battalions) included in the "optimum" package. Westmoreland stated that unless the 2 1/3 divisions were forthcoming, he would have to divert ARVN forces engaged in pacification operations to help take up the shortfall in offensive operations.

MACV's list of troop requirements was formally reported to McNamara on 20 April. Five days later Westmoreland arrived in Washington to discuss the situation in Vietnam with President Johnson. In their meeting the general pressed for the introduction of ARVN forces into the Laotian panhandle and the eventual development of southern Laos into a major battlefield to take pressure off the South. When Westmoreland brought up the 2 1/3-division request, Johnson replied, "When we add divisions can't the enemy add divisions?" Westmoreland contended that the attrition strategy was working and observed, "It appears last month we reached the crossover point in areas excluding the two northern provinces." Westmoreland maintained that MACV had forced that enemy's main-force units into remote areas just as planned; however, extra forces were needed to protect the northern provinces against a possible incursion by North Vietnamese units.

President Johnson, as evidenced by his discussion with Westmoreland, doubted that the Army could reach the crossover point. These doubts were fed by a number of key civilians and civilian organizations—OSD, the CIA, and Robert Komer (the designated head of Civil Operations and Revolutionary Development Support [CORDS]) among them—who were increasingly skeptical of MACV's ability to achieve victory using the current strategy.

Komer had penned a memo to the president prior to departing for South Vietnam on 24 April. Never known to mince words (a characteristic that earned him the sobriquet "Blowtorch"), Komer called for a redirection of U.S. strategic emphasis toward pacification, upgrading the paramilitary forces, jacking up the ARVN and letting them take on the bulk of the fighting, and placing all forces in a unified command under the Americans. Thus Komer, who had been the president's special assistant for pacification since March1966, implicitly rejected the call for more U.S. forces and the strategy that mandated their request.

Meanwhile, the CIA had published a study that concluded that no decisive advantage could be gained from U.S. incursions of the sort

Westmoreland was advocating. The CIA maintained that the vast majority of VC/NVA supplies continued to be generated from *within* South Vietnam. MACV was incensed over the CIA's contention, particularly with respect to Cambodia, where, the Army claimed, over a thousand metric tons of military supplies from the PRC had arrived in the port of Sihanoukville in 1966. Yet, even if *all* the supplies had been destined for South Vietnam, it would have amounted to *less than three tons per day* for a force of over 285,000 guerrillas, hardly a make-or-break operation.

Perhaps the most damning evidence against the Army Concept came from the Systems Analysis people at OSD. In their efforts to measure progress in a war with no fronts, Alain Enthoven and his Whiz Kids applied their form of analysis to the struggle in Southeast Asia. Having no independent means of acquiring information on the war, they based their studies on data supplied by MACV itself. Using that statistical base, in January 1967 OSA began issuing a series of monthly Southeast Asia Analysis Reports that, to the annoyance of the Army, elaborated on the failure of the attrition strategy. In two memos to the secretary of defense on 1 and 4 May, OSA challenged MACV's force request and Westmoreland's contention that progress was being made in South Vietnam. Using the Army's Armored Combat Operations in Vietnam (ARCOV) study and MACV after-action reports, OSA showed that if the Army's strategy remained the same, force increases would have very little impact on the war.

The ARCOV report showed that 88 percent of all engagements were initiated by the enemy. Thus the VC had the initiative. They could either refuse or accept battle on their terms and, in doing so, could control their casualty level. Hence, the attrition strategy was unfeasible, since MACV could not force the enemy to do battle. The OSA report went on to say that while MACV was still prosecuting the war as though Phase 3 insurgency operations were being conducted, the numbers of VC/NVA attacks of battalion size had been decreasing since the arrival of U.S. ground forces in the latter part of 1965. Indeed, the monthly average of such attacks had decreased from 9.7 per month in the final quarter of 1965 to 1.3 per month in the final quarter of 1966. Meanwhile, the number of small-scale enemy attacks had increased by 150 percent over the same period. The implication was obvious to OSA: the Communists had reverted to Phase 2 operations.

While MACV had been out in the border regions chasing the enemy in fruitless attempts to drive up insurgent casualties, it had not provided a shield for pacification, as Westmoreland contended, but had actually left the population exposed to the guerrillas. Indeed, OSA noted *that fully 90 percent of all incidents in any given quarter were occurring in the 10 percent of the country that held over 80 percent of the population.* What was even more distressing, the 1967 incident rate was roughly the same as in 1966 and 1965. Search-and-destroy operations had not succeeded in assisting the government to effect better control of the people. As one OSA report noted, the big-unit war was irrelevant to the pacification effort as long as the enemy could not initiate big battles and win them. As for the Army's contention that if units were broken down to assist in pacification, they risked being defeated in detail, OSA observed that "our forces routinely defeat enemy forces outnumbering them two or three to one. In no instance has a dug-in US company been overrun, regardless of the size of the attacking force, and nothing larger than a company has come close to annihilation when caught moving." Thus, shifting the bulk of U.S. and ARVN forces into pacification efforts hardly constituted the threat that the Army claimed it did. Beginning in November 1966, OSA maintained that a change in tactics was needed if the attrition strategy was to succeed. MACV needed to focus on an effective population security program to deny the VC their sources of recruitment rather than attempt to obliterate enemy forces on the battlefield.

Turning to the MACV request, Enthoven expressed amazement at the absence of any coherent rationale to support the additional deployments, observing that the MACV requirement was based on "unselective and unquantified goals.... What is surprising to me is that MACV has ignored this . . . information in discussing force levels." The OSA report concluded by recommending rejection of Westmoreland's request and calling for the Army to commence serious efforts to upgrade the RVNAF before they assumed a greater role of the defense burden.

Enthoven's analysis carried the day with McNamara. On 19 May a DPM was drawn up recommending that no additional forces be dispatched to South Vietnam other than those already called for in Program 4. The Chiefs, however, persisted. The Army rejected the OSA evaluation out of hand. Furthermore, it sought to exclude other individuals and organizations from having access to the SEA Reports. On at least two occasions General Wheeler strongly recommended to McNamara that the reports "be limited for internal OSD use only" in order to "reduce the dissemination of incorrect and/or misleading information to senior officials of other government agencies, as well as commanders in the field. The day after the DPM was drafted, the Chiefs, in their "Worldwide Posture Paper," reaffirmed their support of Westmoreland's request, claiming that such forces would help "regain the Southeast Asia initiative and exploit our military advantage."

The wrangling over what additional forces should be sent to MACV continued over the next two months. During this period the State Department also became involved in the debate, in the form of a series of options presented by Under Secretary of State Nicholas Katzenbach. Katzenbach initially offered two alternatives, one supporting the JCS position, the other the stand taken by OSA. Predictably, a stalemate quickly ensued. Additional alternatives followed, representing the all-too-familiar practice of finding the middle ground acceptable to all. On 12 June, McNaughton sent a DPM to the president outlining three courses of action. Before a decision was made, however, McNamara visited Saigon on 7 July armed with data from Enthoven showing that 3-2/3-division equivalents could be provided Westmoreland by 31 December 1968 without calling up the reserves.

McNamara arrived in a war zone that had experienced the attrition strategy for nearly two years without any appreciable results. The prototypical military operation since the 173d Airborne Brigade had conducted its first assault on the Iron Triangle back in June of 1965 remained search and destroy. In June 1967, fully 86 percent of MACV's battalion operations time was dedicated to such operations.

Large search-and-destroy operations such as ATTLEBORO (September–November 1966), CEDAR FALLS (January 1967) and JUNCTION CITY (February–May 1967) attempted to bring the enemy to battle so that his forces could be attrited by U.S. firepower. To MACV, attacking enemy strongpoints or base areas was the best way to bring the elusive guerrillas out into the open. For example, ATTLEBORO saw 22,000 U.S. and ARVN troops, complete with B-52 bomber air support and massive artillery fire, conduct a drive into War Zone C, the VC stronghold northwest of Saigon. The seventy-two-day operation was declared a success, since the enemy suffered an estimated 1,100 dead and lost a considerable amount of supplies. Yet, before long the VC reoccupied the area and were operating as before. Major General Depuy, then commander of the 1st Infantry Division, a participant in the operation, recalled the difficulties involved in locating the enemy: "They metered out their casualties, and when the casualties were getting too high . . . they just backed off and waited. I really thought that the kind of pressure they were under would have caused them to perhaps knock off the war for awhile, as a minimum, or even give up and go back north. But I was completely wrong on that. I was surprised a little bit, too, after I took over the division [at] the difficulty we had in trying to find the VC. We hit more dry holes than I thought we were going to hit. They were more elusive. They controlled the battle better. They were the ones who decided whether there would be a fight."

ATTLEBORO was followed by CEDAR FALLS, an incursion into the Iron Triangle. Two infantry divisions participated in the nineteen-day operation that saw U.S. forces kill over 700 VC and capture 613 weapons. The Army's "success" in generating enemy casualties and capturing enemy supplies in these operations led to another large-scale assault into War Zone C, JUNCTION CITY. The operation utilized the Army's 1st Infantry Division, the 173d Airborne Brigade, the 11th Armored Cavalry Regiment (ACR), and a brigade of the 9th Infantry Division. Their mission was to destroy VC/NVA forces and installations in the northern and eastern portions of the War Zone. As General Westmoreland noted, JUNCTION CITY completed the Army's transition of the insurgency into a mid-intensity conflict: "The operation employed for the first time all our different types of combat forces, including paratroopers and large armored and mechanized units."

JUNCTION CITY lasted for nearly two months, from 22 February to 15 April. U.S. forces killed 1,776 VC while capturing vast amounts of ammunition, medical supplies, and more than 800 tons of rice. The Army claimed that CEDAR FALLS and JUNCTION CITY "confirmed the ATTLEBORO experience that such multi-division operations have a place in modern counterinsurgency warfare." Yet the operation was anything but a success. The target, the 9th VC Division, was not rendered ineffective, and with one exception, the only significant engagements were those initiated by the VC. One general stated that "it was a sheer physical impossibility to keep the enemy from slipping away whenever he wished if he were in terrain with which he was familiar—generally the case." The Army utilized massive amounts of firepower: 3,235 tons of bombs and over 366,000 rounds of artillery. Thus, several tons of ordnance were required to kill one VC.

Although Westmoreland claimed that operations like JUNCTION CITY convinced the enemy that basing units near populated areas was "foolhardy," such was not the case. As one Army general conceded, "In neither instance were we able to stay around, and it was not long before there was evidence of the enemy's return." Captured enemy documents and statements issued by the North Vietnamese leadership indicated that not only had the Army failed to seize the initiative but there was every indication that MACV was playing into the hands of the Communist strategy of protracted warfare. For example, VC documents captured during CEDAR FALLS revealed that the enemy strategy was based on concentrating North Vietnamese Army and VC main forces in numerous remote areas to prevent concentration of American forces in the populated Coastal Plain. The objective, as Giap stated at the time, was to draw American forces away from pacification and engage them in inconclusive battles along the frontiers, inflicting U.S. casualties in the process and sapping U.S. will to continue the war. Yet MACV continued to claim that search-and-destroy operations were a success, that they forced the enemy away from the populated areas so that the pacification program could be carried out.

Again, the information available did not bear this out. An analysis of enemy activity in III Corps Tactical Zone (CTZ) during the period 1965–67 showed a dramatic increase in engagements in the four border provinces, from 38 in 1966 to 273 in 1967. While MACV claimed that this proved the validity of search-and-destroy operations, OSA concluded otherwise, noting that "if allied forces had pushed the enemy to the border provinces, we would expect the attack rates elsewhere in III CTZ to have diminished. They doubled." Even worse, the big battles the Army was seeking were not occurring, despite the purported success of operations such as JUNCTION CITY. The enemy was moving away from direct assaults on U.S. positions in favor of hit-and-run mortar attacks which were more effective in inflicting U.S. casualties. Although MACV refused to admit it, the Army was in a small-unit war: by 1967 over 96 percent of all engagements with enemy forces occurred at company strength or less.

Although this information was available to MACV and the Army Staff, it was never systematically evaluated. The only information or feedback that the Army required concerned how well the service was implementing its strategy of attrition, that is, factors such as the body count, weapons captured, enemy supplies destroyed, and so on. The Army, having convinced itself of the validity of its Concept for insurgency warfare in the battle of the Ia Drang Valley, was concerned only with the need to apply it with greater intensity.

This, then, was the operational environment and the organizational attitude McNamara found upon his arrival in Saigon. During his visit Westmoreland reluctantly agreed to a force level of 525,000 troops, an increase that would provide MACV with an additional 19 maneuver battalion equivalents. In the end, the 3-2/3 division equivalents outlined by Enthoven as the maximum available were whittled down by only some 14,400 spaces. On 14 August a memo from OSD initiated Program 5, directing the chiefs to bring U.S. troop strength in South Vietnam to 525,000 as expeditiously as possible.

As the conflict moved into 1968, Westmoreland forwarded MACV'S year-end assessment of the situation in Vietnam. The tone of the report was optimistic. The general held that the arrival of the Program 5 forces would allow for increased offensive operations. The VC, said Westmoreland, had lost control "over large areas and population" in 1967. So confident was Westmoreland that in January he dispatched two brigades belonging to the 1st Cavalry Division to the I CTZ border region around Khe Sanh, drawing them away from the populated region only days before the enemy's biggest offensive to date, the nationwide assault on the populated areas during Tet, the Vietnamese New Year's celebration. The stage was now set for the enemy to deliver a shock that would see the civilian leadership openly challenge the Army's strategy for the war.

Reading 13

EVOLUTION OF STRATEGY

General William C. Westmoreland

Explicit in my forty-four-battalion proposal and President Johnson's approval of it was a proviso for free maneuver of American and Allied units throughout South Vietnam. Thus the restrictive enclave strategy with which I had disagreed from the first was finally rejected.

Since the most serious and immediate enemy threat was in the Central Highlands, I deemed it essential as one of my first moves, which I had pointed out on several occasions in asking for the airmobile division, to deploy an American force there. I intended that a battalion of American marines temporarily secure Qui Nhon for the safe landing of the division. Although I anticipated using Route 19 to supply the division, supplies could go by air, which the airmobile division with its large numbers of organic helicopters was uniquely equipped to accomplish.

No exponent of the enclave strategy, Admiral Sharp nevertheless objected to deploying the airmobile division inland. He wanted to base the division itself at Qui Nhon and clear Binh Dinh province before moving inland, thus insuring a solid base for supply by road. He still was concerned also lest the enemy score a psychological victory against American troops *á la* Groupement Mobile 100. He also believed in using American troops to secure

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populated areas, whereas, in general, I saw that as a task for the ARVN, whose troops, by language, culture, and local knowledge, were better equipped for it.

At least one member of the Joint Chiefs agreed with Oley Sharp: General Wallace M. Greene, Jr., Commandant of the Marine Corps, one who sometimes made his points by an emotional raising of his voice. As a marine, Wally Greene thought in terms of beachheads. Visiting Vietnam, he tried to talk me out of my plan, but while I was determined that no American unit be subjected to the grim fate met in the Highlands by Groupement Mobile 100; I was convinced my plan was sound. Although a commander must observe caution, he wins no battles by sitting back waiting for the enemy to come to him. Given strong support within the Joint Chiefs by Bus Wheeler and Harold K. Johnson, I proceeded with my plan.

The enemy clearly was moving into the third phase of revolutionary warfare, committing regiments and subsequently divisions to seize and retain territory and to destroy the government's troops and eliminate all vestiges of government control. Yet at the same time the enemy's guerrillas, local forces, and political cadres at the hamlet and village level continued their small-unit war, seeking to terrorize and control the population and knock off small government outposts. The war at that point thus had two facets, yet the two were closely interrelated, both aimed at gaining control of the countryside and strangling the towns and cities. Neither facet could be ignored.

In an effort to explain this kind of warfare in simple terms, I occasionally likened the political subversives and guerrillas to termites persistently eating away at the structural members of a building, analogously, the structure of the South Vietnamese government. Some distance away hid the main forces, or big units, which—mixing my metaphor—I called "bully boys," armed with crowbars and waiting for the propitious moment to move in and destroy the weakened building. Only by eliminating the bully boys—or, at least, so harrying them as to keep them away from the building—was there a possibility of eliminating the termites or enticing them to work for our side, an essential though systematic and tedious process.

As I saw the three phases of my strategy, American combat troops were to be used at first to protect developing logistical bases, although some might have to be committed from time to time as "fire brigades" whenever the enemy's big units posed a threat, which was how I contemplated first using the airmobile division in the Highlands. In the second phase, we were to gain the initiative, penetrate, and whenever possible eliminate the enemy's base camps and sanctuaries. So long as the Communists were free to emerge from those hideouts to terrorize the people, recruit or impress conscripts, glean food, levy taxes, and attack government troops and installations, then to retire with impunity back into their sanctuaries, there was little hope of our defeating the insurgency. Invading the sanctuaries also might bring the elusive enemy to battle, affording an opportunity to destroy it's main forces. In the third and final phase, we were to move into sustained ground combat and mop up the last of the main forces and guerrillas, or at least push them across the frontiers where we would try to contain them.

Two additional tasks were to be pursued throughout all three phases: pacification and strengthening the ARVN. By the time the war reached the final phase, I expected the bulk of the people to be under government control and protection and the ARVN to be so trained and equipped and in such numbers that the South Vietnamese alone could deal with any lingering opposition. In a later day that was to be called "Vietnamization."

An intrinsic goal in all these operations was to open roads and waterways, which were essential for moving troops, people, and commerce. Whenever the VC cut a road, they not only showed up the government's wellness but they also isolated communities and made the people vulnerable to propaganda and coercion. If the enemy controlled a road, he had a rich source of revenue from taxes levied on travelers.

In figuring on American troops to do a major share of the fighting against the enemy's big units, I had several considerations in mind. In the first place, the ARVN had greater compatibility with the people than did American troops. Furthermore, since the enemy's large units would be met most often in his base areas or other remote regions, the greater mobility of American units would provide them with an advantage. Superior American firepower would be most advantageously employed against the big units, and using it in remote regions would mean fewer civilian casualties and less damage to built-up areas. The fewer Americans in close contact with the people also meant that much less provocation of the xenophobia of the Vietnamese, that much less opportunity for unfortunate incidents between American troops and the people.

That is not to say that American units were to conduct no operations in populated regions. Although South Vietnamese leaders asked at first that I restrict American presence to remote areas, I declined, unwilling to see my flexibility fettered and also conscious that American performance would set an example and a challenge to the face-conscious Orientals. So strong, too, was the enemy in some populated regions, such as the coastal sectors of the northern provinces, that American troops would have to stage major operations there. The same would obtain in Binh Dinh province and elsewhere. Hopeful that the South Vietnamese would gain pride and confidence by defending their capital, I still planned no major American commitment in Saigon or its close environs. I was similarly hopeful that amid the teeming population of the Mekong Delta the South Vietnamese also could do the job alone. Although the Delta was one of the incubators of the old Viet Minh insurgency and retained a considerable tradition of dissidence, the region was so far from North Vietnam and its supplies that few large enemy formations might be expected to be encountered there.

As events developed, so magnetized were press and television by the conventional fights between large units in remote regions that American contributions to the war in the populated areas often went unnoticed, which may have contributed to the notoriety of an implicitly critical phrase, "Westmoreland's big-unit war." In reality, despite my policy of using American units to oppose the enemy's main forces, more American troops were usually engaged on a day-by-day basis, helping weed out local opposition and supporting the pacification process, than were engaged in the big fights. Similarly, ARVN units also participated against the enemy's big units, particularly ARVN airborne, marine, ranger, and armor units, which I insisted on as a matter of policy.

Yet the very existence of large enemy units made it essential that American troops be prepared on short notice to drop what they were doing and move against a developing big-unit threat. When the troops moved away from the population, the guerrillas obviously gained a chance to recoup their losses, but I never had the luxury of enough troops to maintain an American, Allied, or ARVN presence everywhere all the time. Guarding against local resurgence would in the end be the responsibility of the militia—the Regional and Popular Forces—but it would take time to recruit, train, and equip them and provide sufficient leadership for them to do the job without setbacks.

Had I had at my disposal virtually unlimited manpower, I could have stationed troops permanently in every district or province and thus provided an alternative strategy. That would have enabled the troops to get to know the people intimately, facilitating the task of identifying the subversives and protecting the others against intimidation. Yet to have done that would have required literally millions of men, and I still would have had to maintain a reserve to counter big-unit threats. I never had any prospect of those numbers. In any case, it would have been perilous to ignore the undisputed military canon that to try to be strong everywhere is to be weak everywhere.

Noting the relatively small size of South Vietnam, some might have considered it practicable to seal the land frontiers against North Vietnamese infiltration, thus facilitating the task of rooting out the Viet Cong. Yet small though the country is, its land frontiers extend for more than 900 miles. In World War I close to 6 million Allied troops were needed to man the 455 miles of the Western Front. In World War II, 4.5 million Allied troops were needed to man a 570-mile Western Front. In Korea close to a million United Nations troops were needed to man a 123-mile front across the waist of the Korean Peninsula. To have defended the land frontiers of South Vietnam in similar density would have required many millions of troops, plus others to carry on the fight against the insurgency, numbers that it would have been absurd to contemplate. At peak strength in South Vietnam, achieved in early 1969, American troops numbered 543,400, Allied troops 62,400, and ARVN troops, including militia, approximately a million, for a total well under 2 million.

To provide at least some check, however inadequate, on enemy infiltraton, I had to depend primarily on mobility. Employing only about 45,000 troops, the CIDG[1]-Special Forces camps along the frontier provided bases for patrols that might detect major infiltration, to which units arriving by helicopter might react. The SOG[2] teams operating in Laos harassed infiltrators and collected intelligence on enemy movements, as did both American and South Vietnamese long-range reconnaissance patrols operating within South Vietnam. When those patrols located enemy formations, I could react either with troops or with artillery and air strikes, including strikes by B-52s, although Washington's restrictions on operations in Laos and Cambodia for a long time limited the response there.

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[1] CIDG: Civilian Irregular Defense Groups. South Vietnamese tribesman recruited in remote regions to work with advisors of the U.S. Army Special Forces.

I continued for long to hope for an international force to man a line below the DMZ and across the Laos panhandle. One proposal that Deputy Ambassador Alexis Johnson and I worked out was that this be staged as a regional development project, with engineers extending Route 9 across the panhandle to the border with Thailand. To provide protection for the road construction, combat troops would be deployed, thereby providing an anti-infiltration screen. Yet after a first flurry of interest in an international antiinfiltration force in late 1964, officials in Washington never evidenced any more enthusiasm for it.

From the first I contemplated eventually moving into Laos to cut and block the infiltration routes of the Ho Chi Minh Trail, and in 1966 and 1967 my staff prepared detailed plans for such an operation. When Henry Cabot Lodge returned to Saigon in the summer of 1965 for another tour as American ambassador, he enthusiastically pressed for the move, and his eventual successor, Ellsworth Bunker, also supported it. Yet I recognized that blocking the trail would require at least a corps-size force of three divisions, and I would be unable for a long time to spare that many troops from the critical fight within South Vietnam. When at last, in 1968, our strength had increased sufficiently and the enemy had been depleted enough to make the move possible, President Johnson was so beset by war critics that he would take no step that might possibly be interpreted as broadening the war, which he had publicly announced he would not do.

In lamenting what came to be known, however erroneously, as the "big unit war," critics presumably saw some alternative, for the essence of constructive criticism is alternative. Yet to my knowledge nobody ever advanced a viable alternative that conformed to the American policy of confining the war within South Vietnam. It was, after all, the enemy's big units—not the guerrillas—that eventually did the South Vietnamese in.

The enemy ultimately demonstrated that an enclave strategy was no answer, for enclaves would have done the enemy little damage, and he would negotiate, as he showed unmistakably, only when he was hurting. In 1969 a former Deputy Assistant Secretary of Defense, Townsend Hoopes, in a book titled *The Limits of Intervention*,[3] called for an end of what he termed "hyper-aggressive search and destroy operations" and the adoption of a "modified enclave strategy" involving what he called "seize and hold" operations in the populated areas. That, plus a halt in the bombing of North Vietnam, he wrote, would lead the enemy to negotiate. The enemy's subsequent negotiating record scuttled that theory as thoroughly as it did the enclave theory, and neither theory took into account that while we sat in enclaves, however defined, the enemy's big units would remain free to wreak their will undeterred.

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[2] SOG: Studies and Observation Group. Component of MACV dealing with unconventional warfare.

[3] New York: David McKay Co., 1969

While Hoopes was presumably writing his book and I was the U.S. Army Chief of Staff, he talked with me. Since he mentioned my views only in footnotes, I presume he either had finished his work and merely wanted the interview to provide verisimilitude or had no wish to present any conflicting point of view. I was later surprised when judges of the National Book Awards selected the book as one of the finalists in competition for the year's best nonfiction. That such a theoretically unsound work should receive serious consideration for such an award said something either about the judges' emotions regarding the war or about their knowledge of military operations.

Also writing in 1969, Sir Robert Thompson in *No Exit from Vietnam*[4] remarked that what he termed American "preoccupation" with the enemy's big units could produce no more than a stalemate. "In People's Revolutionary War," he noted, "if you are not winning, you are losing, because the enemy can always sit out a stalemate without making any concessions." With that I would agree, but not with Sir Robert's solution. He wanted to concentrate not against the big units but against the irregulars who, he said, provided the big units their sustenance. What he failed to recognize was that the situation in South Vietnam by the time American combat troops entered the country was different from the situation he had experienced in Malaya in the 1950s. Where there had been little outside support for the insurgency in Malaya, the big units in South Vietnam were no longer depending on irregulars for sustenance but on North Vietnam. From a military standpoint, it was the irregulars that were drawing support from the regulars. Although we were conducting simultaneous campaigns against the irregulars throughout South Vietnam, there could be no stamping them out entirely until the threat of the bully boys with their crowbars was substantially eliminated. With that achieved, both the campaign to uproot the irregulars and the pacification campaign would fall into place.

I elected to fight a so-called big-unit war not because of any Napoleonic impulse to maneuver units and hark to the sound of cannon but because of the basic fact that the enemy had committed big units and I ignored them at my peril. The big-unit war was in any case only a first step. As a former member of my staff in the Pentagon, Lieutenant General Richard G. Stilwell, wrote later, in likening insurgency to a boulder, a sledge first has to break the boulder into large fragments; groups of workers then attack the fragments with spalling tools;

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4 New York: David McKay Co., 1969

then individuals pound the chips with tap hammers until they are reduced to powder and the boulder ceases to exist.

In the early months of American involvement it was risky, even perilous, in regions where the enemy's big units might be met, to commit troops in less than battalion strength, and even then at least a brigade had to be available in case of trouble. After our campaigns of 1966 and 1967 and after the enemy had expended his resources in a nationwide offensive in early 1968, I could commit companies and even platoons and multiple squad-sized patrols without major concern. The boulder was reduced to fragments, the fragments to chips. That the enemy could bring in another boulder from outside the boundaries of South Vietnam and strike again, as he did in the spring of 1972 and finally in 1975, was another matter, one of the peculiarities of a war in which one side respected international frontiers while the other did not.

It was not enough merely to contain the big units. They had to be pounded with artillery and bombs and eventually brought to battle on the ground if they were not forever to remain a threat. That process led inevitably to the dramatic, often costly battles in the Central Highlands and along the DMZ that the American people looked at in horror on their television screens. Why fight for remote, jungle-covered hills, many asked, and then a few days later give them up? By moving American units from populated regions in order to find and fight the enemy in mountainous jungles, were we not letting the enemy call the tune?

The answers were multiple but none more important than the fact that, unlike the guerrillas, if we avoided battle, we would never succeed. We could never destroy the big units by leaving them alone. Besides, the terrain in the Highlands and below the DMZ was no less inhospitable for the enemy than it was for American forces; indeed, the helicopter made it possible to overcome the major obstacles posed by rugged terrain. That in fighting close to base areas beyond the Cambodian and Laotian borders and in the DMZ the enemy enjoyed a certain advantage in shortened lines of communications was evident, and along the DMZ he gained additional advantage from artillery located within the DMZ; but American mobility, firepower, and flexible logistical support more than balanced the equation. What was the alternative: relinquish the Highlands and the territory just south of the DMZ? Do that and you allowed him to push his base areas ever closer to the centers of population so that in the end you would be fighting among the population you were trying to protect.

In many cases, a specific hill or other piece of terrain had no intrinsic value except that the enemy was there or that he was using it as a steppingstone to some objective among the population. Except along the DMZ, the enemy had almost no artillery, so that the high ground with its usual advantages of observation and command of surrounding territory had less longterm meaning than it would have had for a more conventionally armed force.

Nor did we have anywhere near enough troops even to consider holding all the commanding terrain. Once we had accomplished our goal of bringing the enemy to battle and inflicting heavy losses, in the process thwarting his objective and driving him back across the frontiers, what point in continuing to hold the high ground? Had we done that we would have ended up with little parcels of men spread all over the landscape, too few to deter enemy movement and too weak to defend themselves against determined attack. It was also important to avoid trying to hold positions too close to the Laotian and Cambodian borders, for in view of the proximity of large enemy forces just across the borders, that would have been inviting trouble.

To have held onto remote real estate after it had ceased to have meaning also would have tied up troops that might better be used rooting out the local guerrilla. That would have given support to the allegation that the enemy was luring us into the hinterlands to get us away from the population. If that was indeed his intent—and it certainly appeared to be—it was futile, for so great was American mobility that the troops could be returned quickly to the populated areas. Besides, the procedure was a blade with two edges. If the enemy did indeed lure us into remote regions, he at the same time afforded us an opportunity to bring him to battle and inflict the damage we had to impose if we were to achieve our objective of destroying his big units with minimum damage to the population.

The fight for a hill that attained perhaps the greatest notoriety was one that occurred after my departure from Vietnam, but it was a fight fairly typical of others that took place during my command. Part of the notoriety was attributable to the fact that somebody gave the hill a name that invoked images of a meat grinder or a butcher shop: “Hamburger Hill.”

Hamburger Hill—in reality, Apbia Mountain—is a commanding feature near the Laotian border in the rugged A Shau Valley which points like a spear at a throat toward the cities of Hue and Danang. The enemy long controlled the valley after March 1966, when two North Vietnamese regiments attacked a lone CIDG-Special Forces camp there. Although normal practice when the enemy hit an outpost was to reinforce or counterattack, I simply lacked the forces in early 1966 to hold the valley against determined attack, so I withdrew the troops and abandoned the camp. With sufficient forces available in the spring of 1968, I directed a sweep back through the valley to end the threat it posed to Hue and Danang, and my successor, General Creighton W. Abrams, continued to conduct sweeps to deny enemy passage through the valley. On one of those sweeps in early May 1969, a South Vietnamese battalion and a battalion of the 101st Airborne Division found the enemy in strength on Apbia Mountain.

To have left the North Vietnamese undisturbed on the mountain would have been to jeopardize our control of the valley and accept a renewed threat to the coastal cities. A prolonged siege would have been costly and tied up troops indefinitely. The commander of the 101st, Major General Melvin Zais, quite properly ordered an attack.

The attacking American battalion was from the unit I had commanded in Korea, the 187th Airborne Brigade; the commander was Lieutenant Colonel

Weldon Honeycutt, whom I had sent as a corporal to Officer Candidate School and who had later served as my aide. Honeycutt was a competent, experienced commander. For several days he pounded the hill with air and artillery strikes, but only after three unsuccessful infantry assaults did the North Vietnamese finally flee across the border into Laos, leaving behind a rear guard. The North Vietnamese lost 597 men killed, more than a battalion, a sharp defeat by any standards. The Americans lost 50 killed.

The outcry in the United States about the American casualties was vociferous, partly because a certain vocal element would condemn anything connected with the war and partly because the fight occurred at a time when Washington had announced that major American operations were to be phased down. Among the more intemperate critics was Senator Edward M. Kennedy, who on the floor of the Senate called the action "senseless and irresponsible" and implied that American commanders had ordered the assaults and "sacrificed" American lives only to assuage "military pride." That kind of criticism ignored reality and the purpose of the operations in the A Shau Valley.

Honeycutt's tactics at Hamburger Hill were aggressive, a feature of American tactics throughout the war. Aggressive tactics may produce sharp initial losses, but they save lives over the long run, for in a protracted battle, as in a protracted war, casualties inevitably accumulate. Allowed to drag on and on, the Vietnam war as a whole illustrates the point.

It was unfortunate that American strategy in Vietnam came to be known as a "search-and-destroy" strategy, for that misnomer fed a general American abhorrence for the destruction that warfare inevitably produces. A few graphic newspaper photographs and a TV shot of American marines setting fire to thatched-roof huts were enough to convince many that "search and destroy" was tantamount to a scorched earth. Yet in reality the operations were aimed at finding the enemy and eliminating his military installations—bunkers, tunnels, rice and ammunition caches, training camps, the essentials if his base camps and sanctuaries were to continue to provide havens from which he might emerge at times of his choosing to terrorize the people. Those surely are legitimate goals in any kind of war.

Given the elusiveness of the enemy and the junglelike nature of much of the countryside, some search-and-destroy operations failed to find the enemy. Because neither Americans nor South Vietnamese possessed overwhelming numbers, the cordons erected when the enemy was found were sievelike, and the enemy often escaped. Nor was it possible to occupy the sanctuaries permanently. Although we facilitated our later return by leaving behind airfields and manned outposts, foray after foray often had to be launched. To an impatient American press and public, that was frustrating, so that many looked on "search and destroy" as aimless and unrewarding.

That it was necessary on some occasions intentionally to raze evacuated villages or hamlets apparently fed the misunderstanding. So closely entwined were some populated localities with the tentacles of the VC base areas, in some cases actually integrated into the defenses, and so sympathetic were some of the people to the VC that the only way to establish control short of constant combat operations among the people was to remove the people and destroy the village. That done, operations to find the enemy could be conducted without fear of civilian casualties.

Although South Vietnamese authorities usually tried to provide comfortable facilities for the refugees, some hardship inevitably occurred, and the people understandably resented giving up their homes. Yet the alternative was to leave them exposed to the destruction of battle. By depicting evacuation of the fortified village of Ben Suc in the Iron Triangle early in 1967 as an act of inhumanity rather than the essential and—under the circumstances—beneficent act that it was, a correspondent for *The New Yorker* magazine, Jonathan Schell, added to the misunderstanding. That it was infinitely better in some cases to move the people from areas long sympathetic to the VC was amply demonstrated later by events that occurred when the discipline of an American company broke down at a place called My Lai.

The U.S. military strategy employed in Vietnam, dictated by political decisions, was essentially that of a war of attrition. Since the World War I battles of the Somme and Verdun, that has been a strategy in disrepute, one that to many appeared particularly unsuited for a war in Asia with Asia's legendary hordes of manpower. Yet the war in Vietnam was not against Asian hordes but against an enemy with relatively limited manpower. As the South Vietnamese government's control embraced more and more of the countryside, the enemy's recruiting base decreased and the VC had to depend upon the North Vietnamese to make good their losses. Although the North Vietnamese might constantly rebuild their units, they did so each time with manpower less adequately trained. Meanwhile, the continuing battle bought time to build up the ARVN and enable the government to solidify its position in the countryside.

In any case, what alternative was there to a war of attrition? A ground invasion of North Vietnam was out, for the U.S. national policy was not to conquer North Vietnam but to eliminate the insurgency inside South Vietnam, and President Johnson had stated publicly that he would not "broaden" the war. Because the number of American troops at my disposal would for long be limited, attacking the enemy inside Laos and Cambodia would be beyond my means for months, even years; I would grapple with restrictions on those operations when the time came, although I was destined never to overcome the restrictions Meanwhile, I had to get on with meeting the crisis within South Vietnam, and only by seeking, fighting, and destroying the enemy could that be done.

An impatient people, we Americans seem to feel that once the first American troops arrive, the situation will quickly be set right and that once the President turns the faucet, the flow of troops will be swift and unrelenting. In an "area war," as the war in Vietnam was, there were no front lines to provide a gauge of progress. Reading every day of American troops fighting and winning, hearing pronouncements by national leaders that we were making steady progress, people unaware of how few American troops were actually engaged tended to see an early end that under the circumstances could not be. Even with large forces, a war of attrition can never be concluded swiftly.

Even had South Vietnam been a modern, fully developed country with adequate logistical facilities readily adaptable to military use, troop build-up would have been slow; for in view of world-wide commitments, the total numbers of America's armed forces were relatively small. In asking the first increment of American troops to meet the crisis, I had anticipated that not until the end of 1965 would all the first increment arrive. Even that pace involved a serious calculated risk, for men locked in combat cannot long survive without adequate logistical support. By the end of 1965, six months after President Johnson's decision to go beyond base security and enclave missions, American strength in Vietnam totaled 184,000. Included were only three full combat divisions—one infantry, one airmobile, one Marine—and three Army combat brigades, and a Marine regiment. The marines had an air wing, the Air Force two tactical fighter wings. Those were supplemented by an Australian battalion, a South Korean marine brigade, and a South Korean infantry division. All together, those forces represented forty-five maneuver battalions.

The Viet Cong and the North Vietnamese, meanwhile, had been rapidly building their strength. By mid-November 1965 MACV intelligence listed a possible nine North Vietnamese regiments inside South Vietnam and noted that since July regimental-size VC units had more than doubled, from 5 to 12. If that kind of build-up (forty-eight battalions) continued, I noted in a cable to Washington, it would be twice that planned for the second increment of American troops.

Concerned by that development, Secretary McNamara near the end of November flew direct from business in Europe to Saigon. In conferences with him, subsequent cables to and from Washington, a conference in mid-December with Admiral Sharp in Honolulu, and talks in Saigon during a visit from Generals Wheeler and Johnson, I formulated my concept of operations, deployments, and organization, and recommendations for the troops I considered we had to have to meet the changed enemy situation.

Under my plan of operations, every American division and separate combat brigade was to build a base camp, in effect a home station, which was essential for such rear echelon functions of the division as record keeping and maintaining reserve supplies. Conscious of the normal human tendency to make improvements in living arrangements, I had to maintain a constant vigil to insure that these camps remained relatively austere, both for reasons of economy and so that they could be moved if a division had to be redeployed far from the original base camp. Although tents were to be used at first, each camp eventually was to have semipermanent, cheap frame buildings, for over the long run those would be more economical than constantly replacing tentage that rotted quickly in the humid tropical environment. The region in the vicinity of each base camp constituted the unit's tactical area of responsibility, much as a unit in conventional warfare has a zone of advance. Unless called on to move elsewhere to engage large enemy forces or penetrate enemy sanctuaries, the unit was to patrol its zone, bring the enemy to battle, and in the process help South Vietnamese forces provide security for government ministries and the National Police engaged in pacification. The unit was also to assist in training the ARVN and to perform civic action, promoting self-help projects with the people such as digging wells and building bridges, schools, dispensaries.

When moving far from the base camp, a unit would leave behind a small security and house-keeping cadre. In the field the unit would erect fire-support bases to serve as protected artillery positions and as combat bases for patrols and for sweeps to find the enemy and his supply caches. Smaller fire-support bases might house artillery alone with a small security force. Artillery pieces were to be able to fire in any direction and, when sufficient artillery was available, provide interlocking fire with other bases.

As American forces increased, I established three corps-type headquarters with boundaries corresponding to those of the Vietnamese corps. In addition to commanding American units, each commander served as senior adviser to the Vietnamese corps commander. Neither technically being subordinate to the other, they co-ordinated all operations and logistical matters, much as I did with the Joint General Staff in Saigon. Practically, the role of adviser gave the U.S. commander controlling influence but not authority over the Vietnamese per se.

For several reasons I chose not to designate the American headquarters as corps. I wanted to avoid confusion with the four existing Vietnamese corps headquarters and also to emphasize that each American headquarters was supporting the Vietnamese—a force in the field supporting a corps, thus a "field force." Nor was the headquarters a corps in the usual tactical sense, since the commander had territorial responsibilities as well as tactical ones and eventually, I anticipated, would also be in charge of pacification.

Because the III Marine Amphibious Force at Danang already constituted a corps-type headquarters, it served as the American headquarters in the northern provinces alongside the South Vietnamese I Corps. A U. S. Army headquarters, the I (Eye) Field Force, Vietnam, located at Nha Trang served with the Vietnamese II Corps, responsible for the central provinces; and another U. S. Army headquarters, the II Field Force, Vietnam, at Bien Hoa served with the Vietnamese III Corps in the region around Saigon. Since I contemplated no major American deployment in the Mekong Delta, no comparable headquarters served with the Vietnamese IV Corps.

This organizational concept provided a flexibility that was essential, for who could predict exactly how the battle would develop? If necessary, for example, a field force headquarters might assume the role of a field army headquarters with one or more tactical corps subordinated to it. In later months, after introducing U. S. Army troops into the northern provinces to help meet an enemy threat, I found it necessary to put a corps headquarters within the zone of the III Marine Amphibious Force, to operate as a true tactical headquarters without advisory or territorial responsibilities, so that the flexibility paid off.

During those early months, I was concerned with the tactical methods that General Walt and the marines employed. They had established beachheads at Chu Lai and Danang and were reluctant to go outside them, not through any lack of courage but through a different conception of how to fight an anti-insurgency war. They were assiduously combing the countryside within the beachheads, trying to establish firm control in hamlets and villages, and planning to expand the beachhead gradually up and down the coast.

The marines maintained that their approach was essential because of the proximity of densely populated hamlets and villages to their installations, particularly the air base at Danang, settlements that had been dominated by the Communists almost without challenge for at least fifteen years. Yet the practice left the enemy free to come and go as he pleased throughout the bulk of the region and, when and where he chose, to attack the periphery of the beachheads. With the enemy free to recruit in regions the marines had yet to enter and to operate in nearby hills with impunity, every subsequent move of the marines to extend the peripheries of the beachheads would become progressively more difficult and would make the beachheads more vulnerable. While the marines operated in that manner, the main force VC battalions in the I Corps Zone during 1965 had more than doubled, reaching fifteen by the end of the year.

I well understood the doctrinal approach behind the marines' methods. The very *raison d'etre* of the Marine Corps is to provide an amphibious force capable of establishing shallow beachheads on hostile shores. By the very nature of their mission, marines are neither trained nor equipped for long, sustained operations, and it can be said that they were employed both in Korea and Vietnam on operations contrary to their mission simply because they existed and they were needed. Since by U. S. Marine Corps doctrine, for example, only the first elements of the assaulting force are to be delivered by helicopter, subsequent waves coming across the beach, the marines in comparison to U. S. Army units had few helicopters. That restricted mobility. Designed for short-haul beachhead supply, their helicopters were also more ponderous and ungainly than the Army's smaller, more versatile "Huey."

Understandably proud of an admittedly excellent close-support tactical air system, the marines long resisted the helicopter gunship. Their self-confidence also apparently made them reluctant to ask help, so that often I had almost to force them to accept U. S. Army support. Self-confidence and independence, however admirable, constitute a two-way street in command relationships Whereas it is incumbent on the over-all commander to assure that his subordinates have what he discerns they need, it is also incumbent on the subordinate to ask for what he needs.

Rigidity in doctrine is no virtue, and problems exist to be overcome. I believed the marines should have been trying to find the enemy's main forces and bring them to battle, thereby putting them on the run and reducing the threat they posed to the population. As a first step I wanted General Walt to create a two- or three-battalion force capable of moving quickly by helicopter into enemy-dominated regions and more and more to join with the ARVN in operations large enough in numbers to punish the enemy's big units and disrupt their bases and supply caches.

Although there was no question that since I was commander of all American military forces in Vietnam, the marines were under my over-all command, I had no wish to deal so abruptly with General Walt that I might precipitate an interservice imbroglio. The III Marine Amphibious Force was a part of the Fleet Marine Force, Pacific, and thus remained for administration under the commander of the Fleet Marine Force, General Krulak. Furthermore, Wally Greene, the Marine Corps commandant in Washington, kept a watchful eye on every sparrow, and as a senior regional commander, General Walt had a mission-type order which by custom afforded him considerable leeway in execution. Rather than start a controversy, I chose to issue orders for specific projects that as time passed would gradually get the marines out of their beachheads.

In what may be called a pacification approach to anti-insurgency warfare, the marines achieved some noteworthy results, particularly with one of the more ingenious innovations developed in South Vietnam, the Combined Action Platoon. Composed of marine volunteers and Vietnamese militia, the platoon would move into a village and stay, getting to know the people, winning their trust, and working closely on civic action projects.[5] The first was formed in the summer of 1965 under Vietnamese-speaking Lieutenant Paul R. Ek. Although I disseminated information on the platoons and their success to other commands, which were free to adopt the idea as local conditions might dictate, I simply had not enough numbers to put a squad of Americans in every village and hamlet; that would have been fragmenting resources and exposing them to defeat in detail.

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[5] For an excellent account of one of those platoons, see F.J. West, Jr., *The Village* (New York: Harper & Row,1972).

Reading 14

FORGING A NEW ARMY

Brigadier General Robert H. Scales, Jr.

By late afternoon on February 26, Captain H. R. McMaster had been at war for 72 hours. His tank, Eagle 66, led a nine-tank formation as it moved across the featureless Iraqi plain like a squadron of miniature warships gliding through a glass-calm sea. Inside the steel body of Eagle 66, three other soldiers peered intently into a swirling sandstorm searching for the lead tanks of the Iraqi Tawakalna Division.

Isolated in the driver's compartment in front, Specialist Christopher "Skog" Hedenskog lay supine on his "lazy boy" couch. Skog's greatest fear was that his tank, the one that carried the troop commander, might stumble over a mine and miss the war. As he peered intently ahead, he nudged his T-bar left and right to steer smoothly around every piece of suspicious metal or slight imperfection in the ground ahead.

Staff Sergeant Craig Koch, the gunner, sat in the right of the turret, wedged between the gently moving gyro-stabilized gun and a densely packed jumble of white boxes and black telescopes illuminated periodically by blinking red, white, yellow, and green computer lights. The sandstorm, which limited visibility to 900 meters, made Koch very tense. He knew that in a tank battle, victory goes to the gunner who sees the other guy first.

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Koch pressed his head tightly against the vinyl rest of his thermalimaging sight, his right hand gently turning the "cadillac" handgrips left and right to maintain a constant, rhythmic slewing motion of the turret. His left hand nervously flipped the toggle that changed his sight picture from 3 to 10 power and back and forth between a "black hot" and "white hot" thermal image. He strained to discern from the desert horizon any telltale point of light that would be his first indication of Iraqi armor.

To Koch's left sat Specialist Jeffrey Taylor, youngest and newest of the crew. Taylor had mastered the gymnastics of loading a 54-pound projectile into the pitching breech of the main gun. Less proficient loaders were known to ride with a round cradled in their arms for faster loading. Not Taylor; he could routinely load from the racks in a second and a half. At any rate, McMaster didn't allow free rounds in the turret . . . too dangerous. He wanted them kept safely isolated behind the inch-thick steel plate of the ballistic shield to prevent secondary explosions if they should take an enemy round. Taylor's job on the move was to steer the tank using a satellite position-locating device mounted on a bracket over the gun breech. Every few seconds he would crouch forward, read the digital display, correct Skog's heading, and drop back into his seat.

The crew's senses were muted inside the combat vehicle crewman helmets that each wore. The whine of the tank turbine was faded and distant. With his head outside, McMaster could hear, faintly, the staccato beat of the tank tracks as they churned through the desert, throwing behind a mud-sand plume. Above Koch, the thermal-sight cooling motor rattled continuously. The sound, coupled with the continuous motion of his sight, gave him the sensation of looking at a slow-moving, ghostly, black-white panorama through an old-time nickelodeon.

McMaster sensed intuitively that he was closing on the Iraqis. He ordered his vulnerable Bradleys, scouting to the front, to slip behind the protective line of tanks. Endless battle drills allowed the troop to shift formation immediately without further instruction. McMaster, centered now among eight other tanks, broadcast a clipped "Follow my move," and each tank fell behind in formation, four tanks echeloned on either side.

The shooting war began for Eagle 66 at 1618 hours and lasted exactly seven seconds. As he crested a slight rise, Koch spotted not one, but eight thermal hot spots. He could only make out a series of thin lines through his sight because an earthen berm masked the image of each Iraqi tank. Eagle 66 was loaded with a high-explosive antitank round, or HEAT, not the optimum choice for taking on the Soviet-made T-72 tanks. Should Koch's first shot hit the berm, the HEAT round would explode harmlessly. Koch screamed, "Tanks, direct front." McMaster spotted the tanks. "Fire, fire sabot," he yelled as he kicked up the metal seat and dropped inside to look through his own thermal imager. McMaster's clipped command was a code that automatically launched his three crew mates into a well-rehearsed sequence of individual actions. To Jeff Taylor, "Fire, fire sabot" meant that once the loaded HEAT round was gone, he must reload sabot, known to tankers in the desert as the "silver bullet."

Skog looked up and began immediately to "follow the tube" with his steering bar as he drove the tank briskly forward at 20 miles per hour. By aligning the tank body with the turret, Skog kept the 2-foot-thick frontal armor pointed toward the enemy. Koch, the gunner, knew what "fire" meant. He hit the button on his laser rangefinder. The red digital figure "1420" appeared just below the target reticle in his sight. "Jesus," Koch thought, "this sucker is close, practically a 'gunfight at the OK Corral' at tanker ranges." Red dot centered, Koch squeezed the trigger on the "cadillac," and the steady rocking motion of the moving tank was momentarily interrupted by a slight jerk and a muffled boom. Outside, the blast was deafening. Inside, the crew, working now on automatic, barely noticed any sensation other than an acrid smell of burned cordite and a discernable drop in air pressure as the HEAT round sucked out turret air on its way to the target.

Koch's HEAT round found an Iraqi tank less than one second later. It cleared the berm by 6 inches and struck a spot 4 inches above the base of the turret ring. Four pounds of Composition A3 exploded in a narrow 3,000-degree jet of burning gas, transforming the armor plate underneath into a white-hot, viscous fluid. The jet penetrated and continued to burn inside the tank, spewing gas and liquid turret metal in a deadly cone back toward the bustle of the turret. Two milliseconds later, gun propellant charges stored exposed in the bustle ignited. Half a second later, the turret separated from the tank body, spinning lazily 20 feet into the air like some cylindrical box lid that had been carelessly flipped open by an unseen hand. Sheets of white sparks, blue-white frame, and black smoke erupted from the now shapeless hulk.

A half-second after the first three Iraqi crewmen died, Taylor pushed himself back in the seat and kicked his right knee against a padded switch. With a smart clang, a shiny steel plate slammed open beside him, exposing two rows of deadly silver bullets ready to load. Taylor's right hand hit a release button and a round popped forward. Continuing the motion, he reached for the steel base of the projectile with his left hand and jerked it into the crew compartment. Like a twirler with an enormous baton, he spun the round nose forward and flicked it into the gun breech. As his knee left the switch, the safety door closed, instantly shutting off the crew from the volatile ammunition. Taylor's fluid motion took two seconds . . . about average for the fastest loader in the regiment.

Koch had another target. He pushed the illuminated sabot button on his computer to index a different round. Imperceptibly, the computer dropped the gun's point of aim half an inch and automatically refined the aim further to compensate for other ballistic variations in range, crosswind, temperature, and velocity at the muzzle. The gun's stabilizer kept it locked automatically on the target even as the tank gently pitched and swerved. The rangefinder read 600 . . . a chip shot. With sabot, berms were no problem. Koch couldn't miss. He squeezed the trigger on the "cadillac." The second round was gone. The battle was now three seconds old.

The slender, yard-long, depleted uranium dart of the sabot round crossed the killing zone in a fifth of a second. It tore through the berm and hit the T-72 with the force of a race car striking a brick wall at 200 miles per hour, but with all of its energy compressed into an area smaller than a golf ball. One millisecond later the dart broke through just above the track and a foot below the turret ring. Two milliseconds later it had gone through to the right side of the tank, then the berm again, and off onto space. The dart's impact caused what ballistics scientists tactfully term a "pyrophoric effect," the result of thousands of tiny bits of dense uranium material, sheared off and turned white hot, flashing throughout the crew compartment. One piece of metal torched through the combustible cardboard of the propellant charges in the autoloader. A second Iraqi tank erupted in grisly pyrotechnics.

Koch aligned his gun with a third tank; range—400 meters. The enemy turret filled his telescope. Taylor had the round "up," and a third sabot streaked to its mark. The exploding T-72 was so close that McMaster felt a blast of hot wind against his face and watched, transfixed, as a shower of pyrophoric sparklers flew backward from the sabot impact and arched lazily over his head.

Suddenly other enemy tanks started to come alive, twisting their turrets to and fro like a herd of confused Paleolithic monsters searching for some unseen predator. The remaining tanks of Eagle troop closed on Eagle 66 and joined the gunfight in a disciplined, sequential pattern of engagement constantly practiced by the troop in peacetime. In 10 seconds, the five remaining Iraqi tanks erupted in flames. The battle lasted barely half a minute. In 23 minutes of combat, Eagle troop "killed" 30 more armored vehicles. Two platoons—nine lone American tanks—had cut a 3-mile swath of destruction through Iraq's most capable armored force and had virtually destroyed a tank force four times its size.

The example of these four cavalrymen from the 2d Squadron, 2d Armored Calvary Regiment, in the Battle of 73 Easting dramatically illustrates the transformation of the American Army from disillusionment and anguish in Vietnam to confidence and certain victory in Desert Storm. Only 100 ground combat hours were necessary for the Army to reestablish itself convincingly as a successful land combat force. During that brief period, mechanized forces moved more combat power faster and farther than any similar force in history. They averaged 95 kilometers per day, more than twice as many as the Wehrmacht's best blitzkrieg effort. Helicopter-borne forces conducted history's greatest aerial envelopment by placing the combat elements of an entire division 160 miles deep behind enemy lines. As part of the Coalition, the American Army decisively defeated the fourth largest field army in the world. It did so at the lowest cost in human life ever recorded for a conflict of such magnitude.

The 100-hour victory was all the more extraordinary because the American Army had seldom done remarkably well in the opening battles of past wars. America's traditional disdain for large standing armies has usually prompted a rapid demobilization at the end of a major war. Whether lulled by the euphoria of victories like those in the two World Wars or relieved by the end of an indecisive conflict like Korea, the nation wanted to believe that there would never be another war. As a result, military preparedness declined drastically so that, almost without exception, from the War of 1812 to Task Force Smith in Korea, American soldiers found themselves overmatched, outsmarted, and under-gunned in the first battles. Victories came eventually, but at great cost: green American soldiers learned the art of war the bloody way, on the job. After Vietnam, the Cold War prevented a wholesale demobilization, despite the country's distinctly antimilitary mood, and the American Army committed itself to a revolutionary program of reform. The result was a peacetime army that was better prepared for war than any American Army in history.

To be sure, history tells us that disaster is often the surest catalyst to reform, particularly among armies, which tend by their conservative nature to resist change. Napoleon's Grand Army emerged from the defeated citizen mobs of the Directory. In turn, Napoleon's obliteration of the once-mighty Prussian army at Jena induced reformers such as Scharnhorst and Gneisenau to construct from the ashes of defeat an army capable of brilliant victories against Austria in 1866 and France in 1870. Subsequent defeat on the Western Front in 1918 reinvigorated reform in Germany and gave the world blitzkrieg 20 years later.

The Post-Vietnam Army

The American Army emerged from Vietnam cloaked in anguish. In the early seventies it was an institution fighting merely to maintain its existence in the midst of growing apathy, decay, and intolerance. Forty percent of the Army in Europe confessed to drug use, mostly hashish; a significant minority, 7 percent, was hooked on heroin. Crime and desertion were evident in Germany, with at least 12 percent of soldiers charged with serious offenses. In certain units, conditions neared mutiny as soldier gangs established a new order in the barracks through extortion and brutality. Barracks became battlegrounds between blacks and whites. Racial violence spread into the streets of garrison communities from Fayetteville, North Carolina, to Bamberg, Germany. Soldiers assaulted noncommissioned officers, officers, and their families. In Vietnam, the practice of "fragging"—attacking unpopular leaders with grenades—remained a problem even after American soldiers ended active combat operations. Between 1969 and 1971, Army investigators recorded 800 instances of attacks involving hand grenades in which 45 officers and noncommissioned officers were killed.[1]

Soldiers rebelled for many reasons. In part, their ill-discipline reflected a concomitant decline of order within American society. Whether right or not, many in American society took out their collective frustration with Vietnam on the most visible American presence there—the Army.

Few young men wanted to be among the last to be drafted into an institution that promised to end the draft, and fewer still were willing to join voluntarily. As a result, the Army reluctantly accepted markedly lower-quality soldiers. Forty percent had no high school diploma and 41 percent were Category IV soldiers, a mental aptitude grouping of the lowest order. The lower standards for induction forced the Army to lower its standards for discipline and training. Yet even with lower standards, the ranks of young men willing to wear the uniform continued to thin. By 1974 the Army was 20,000 soldiers below authorization and missed its reenlistment target by 11 percent. The combat arms were short 14 percent. Manning and training shortfalls combined to make only 4 of 13 Active component divisions combat-ready. One frustrated young major, when interviewed by Drew Middleton of the *New York Times*, said, "You ought to see them, babied, pampered, dumb. Hell, they couldn't even lick the Cubans."[2]

Noncommissioned officers and officers, particularly the younger ones, found themselves trying to lead an army in purgatory. They were caught between soldiers they were unable to discipline and an "all-volunteer army" that had yet to take recognizable form. The job was thankless as well as frustrating. A 1973 Harris Poll revealed that the American public ranked the military only above sanitation workers in relative order of respect. Faced with no support inside or outside the institution, tens of thousands voted for the future with their feet.

First Attempts at Reform

Many stalwart leaders remained, however, and resolved to turn things around. General Creighton Abrams, a protégé of General George Patton, was determined to wrench the Army out of its lethargy and set it on a course toward reform. Like Patton, Abrams was also known for his bluntness and honesty. As Army Chief of Staff from 1972 until 1974, Abrams concentrated on ensuring that the Army was prepared to fight. In a speech repeated time and again during his tenure as Chief of Staff, Abrams told his audience with great passion: "You've got to know what influences me. We have paid, and paid, and paid again in blood and sacrifice for our unpreparedness. I don't want war, but I am appalled at the human cost that we've paid because we wouldn't prepare to fight." He was equally determined to restore a sense of values to the Army. In a time of growing cynicism, the craggy-faced, "fireplug" Chief constantly reminded dispirited leaders of the ideals that had brought them into the Army: patriotism, integrity, honesty, and devotion to duty. His tenure as Chief was tragically cut short by cancer in 1974, but before he gave up the stewardship of the institution to General Fred Weyand, he had instilled a new spirit of renewal among the professionals. He had convinced them that reform was not only possible, but had already begun.[3]

First evidence of Abrams' tough, uncompromising, but caring push toward reform began to appear in Europe as leaders there faced the tough issues of crime, racial strife, and professional lethargy head-on. General Michael Davison, the commander in Europe, instituted a series of programs to wrest control of the barracks back from unruly soldiers. Crime statistics actually increased somewhat in 1972 as gang leaders were rounded up and court-martialed. The authority to test randomly for drugs and the "expeditious discharge program" begun in 1973 were essential weapons in the battle to win back the barracks. Soldiers found to be habitual users or just troublemakers and malcontents could be immediately released from service without lengthy court-martial proceedings. Within four months, the Army in Europe discharged 1,300 gang members, drug users and dealers, and other criminals.[4] Davison also began a top-to-bottom racial awareness program that brought black and white soldiers together to confront the growing racial mistrust and polarization that so nearly brought the Army in Europe to its knees. Noncommissioned officers, sensing a return of trust and authority, responded by restoring the proven chain of command for dealing with soldier grievances. Without fanfare, the so-called "enlisted men's councils," intended to allow soldiers to petition directly to battalion commanders, gradually disappeared. Funds were tight and the 1973 Arab oil embargo significantly limited large-scale maneuvers, but by year's end the Army was largely out of the barracks and focused on relearning the basics.

Davison could garner only enough money, resources, and public support to conduct a rear-guard action against erosion of soldier welfare and morale. By the mid-seventies, one-third of the soldiers in the four lowest grades had families, a fivefold increase over the pre-Vietnam drafted Army. Europe in particular found it very difficult to assimilate this new social order into a crumbling infrastructure originally constructed for single soldiers. High housing costs were devastating to the 21,000 families of young first-term soldiers forced to live on the local European economy. Soldiers often had to rely on a second job or, in the States, food stamps to provide adequate support to their families. One financially beleaguered soldier, after spending only for food, clothing, housing, and other essentials, came up $60 per month short. He lamented, "I like being a soldier and serving my country, but when you have to go home at night and hear your stomach growl and there's no money for food, then you wonder why you're doing it."[5]

Herculean efforts by Weyand, Davison, and other leaders restored order in the worst units, an essential first step toward institutional reform. However, substantial improvements in soldier quality and the quality of soldiers' lives would require an equally substantial increase in the Army budget that would not come until the late seventies.

The October '73 War

The fourth major Arab-Israeli War, which began on October 6, 1973, jolted the Army out of its doctrinal doldrums and forced it to face the reality that its method of fighting, if not changed, risked obsolescence. On that day, the Egyptian Second and Third Armies forced their way across the Suez Canal, penetrated the Israeli Bar Lev Line, and pushed deep into the Sinai in a stunningly successful operation. Concurrently, five Syrian divisions rushed the Golan Heights and locked themselves into a hellish tank-on-tank battle with the Israelis. For 16 days Americans watched transfixed as the Israelis fought to restore their defenses and regain the initiative.

The war influenced the Army's effort toward reform for two reasons. First, it was the first large-scale confrontation between two forces equipped with modern weapons representative of those found in NATO and the Warsaw Pact. As such, the battle was a propitious window on the future. Second, the battle was so bloody, intense, and close-run that policymakers outside the Army began to seriously question the ability of a seemingly moribund American Army to fight a war of similar intensity. The war prompted a compelling argument for sweeping modernization and reform.

The Israeli experience made it clear to the Americans that the modern battlefield had become enormously more lethal. The terrible destruction that US Army investigating teams observed in the Sinai and on the Golan Heights was the first evidence of the precision revolution in warfare applied to ground combat. American pilots in Vietnam first took advantage of precision technology in bombing raids over North Vietnam. In the air as well as on the ground, two distinct methods delivered ordnance with precision. The first was to instrument and computerize the delivery platform so that it greatly reduced the radial error, or circular error probable (CEP), of its unguided, or "dumb," bombs. The Navy A-7, later purchased by the Air Force, was the first close air support aircraft to be so equipped. With computerized bombing, the average CEP for fighter aircraft decreased from 300 meters to fewer than 30 meters. The second technique was to make the bomb or projectile itself "smart" by engineering a method of precision guidance. Using reflected laser energy or internally mounted "fire-and-forget" seekers, projectiles could be guided (or guide themselves) directly into a target with virtually no error.

In the October '73 War, the precision revolution was most apparent in the tank and infantry direct firefight. Range finders, analog ballistic computers, and rapid improvements in main-gun ammunition technology gave tanks an enormous advantage in long-range precision gunnery. A World War II tank required an average of 17 rounds to kill another tank at a maximum range of approximately 700 meters. By 1973 tanks required only two rounds to kill at 1,800 meters. Both the Israelis and the Egyptians possessed precision weapons in the form of wire-guided antitank missiles. The Soviet Sagger, available in large numbers to the Egyptians, was a primitive but effective first-generation missile. The American TOW used by the Israelis could kill with almost a 90 percent probability out to a range of 3,000 meters. To a small unit tank or infantry commander, the realities of the precision revolution applied to the direct firefight meant, in soldier parlance, "what can be seen can be hit, and what can be hit can be killed."

The Israelis still believed the tank to be the dominant weapon on the battlefield, but the presence of lethal antitank missiles and rockets made the battlefield too lethal for tanks to go it alone. All battlefield systems had to be balanced and employed in synergy if a unit were to survive. Direct fire or artillery suppression of enemy systems was essential if platoons and companies were to maneuver against a force liberally supplied with wire-guided missiles.

The Israeli experience also made it clear that, at least for the foreseeable future, the Americans would not be able to rely solely on superior technology to win against the quantitatively superior Soviets. Tank-on-tank combat showed the Soviet T-62 tank to be a match for the older M60, particularly at close range. The Soviet BMP infantry fighting vehicle proved a particularly nasty surprise because it was the first true infantry fighting vehicle. The proliferation of antiaircraft missiles and guns greatly complicated close air support, long considered by the American Army as essential to offset the firepower imbalance of direct and indirect fires posed by superior Soviet numbers.

If the future enemy were Soviet, how could the Army hope to win when the Soviets possessed not only greater numbers of weapons but ones of equal or better quality? The answer seemed to lie in harnessing the intangibles: to optimize the fighting qualities of limited numbers by training each soldier to fight to his full capacity and to create a superior war-fighting method through progressive doctrinal reform. Evolutionary changes in training and doctrine would not be enough to close the gap on the Soviet army. Ten years had been lost wandering in the jungles of Vietnam. What was needed was not change, but revolution.

Training Reform

The powerful personality of General William DePuy, who at the establishment of the Army's Training and Doctrine Command (TRADOC) in July 1973, became its first commander, dominated the process of institutional metamorphosis in the early years in training, doctrine, and leader development.[6] DePuy's experience as an infantry officer in Europe during World War II profoundly affected his vision of how a future army should fight. He had witnessed poor-quality soldiers, sent into battle by poorly prepared leaders, waste themselves in poorly conceived and executed operations against an enemy often better led and better prepared for the harsh realities of combat. Thirty years later DePuy retained a pervasive respect for the fighting skill of the German army, as well as an often critical view of the leadership and fighting ability of American soldiers. His fixation on the European battlefield remained steadfast, and he sought from the start of his tenure at TRADOC to redirect the Army's focus from jungle warfare to a possible ground war with the Soviets on the plains of central Europe. He emphasized the value of the indirect approach in battle and stressed the importance of suppressing an objective with direct fire before assaulting a prepared defense. Nevertheless, his combat focus remained, as it had in World War II, on the "how-to" of unit-level training, battle drills, and coordinating tanks, artillery, and infantry.[7]

As with so many of his ideas, DePuy derived his vision for a revolution in training from his experience with the 90th Division in World War II. The 90th trained a full two years in the United States and England prior to D-Day. DePuy recalled with dismay how the division trained for combat *by the numbers*, devoting each day to endless field firings, road marches, and classroom lectures. "Learning and relevance," he noted, "were secondary to scheduling."

The division learned to fight for real against the Germans in Normandy—the Germans did the instructing. In six weeks, the 90th Division lost 100 percent of its strength in infantry soldiers and 150 percent of its infantry officers. Years later, DePuy blamed the slaughter on inept leaders at the division level who were unable to train infantry companies and platoons to take ground against skilled resistance.[8] Some officers were reasonably well trained in the scholastic art of "drawing arrows on a map." Yet these same officers had no idea how to make soldiers perform at the points of the arrows. DePuy watched them march soldiers against well-defended hedgerows after a few rounds of preparatory fire when battalions of machine guns, tanks, and artillery should have been used to suppress the enemy. He watched countless soldiers die in unnecessary frontal assaults because impatient commanders ignored obvious soft spots in the enemy's defenses.

In time the 90th Division would fight better. In Normandy a lieutenant's life expectancy was two weeks; five months later, during the Battle of the Bulge, it was 10 weeks. Yet the price paid for improvement was too high. In DePuy's analytical terms, "the casualty curve was too steep and the seasoning curve too flat." When he took command of TRADOC, DePuy determined to steepen the seasoning curve, preferably without paying in blood.

Post-Vietnam training methods had changed little from World War II. Huge training centers continued to crank out soldiers en masse. Teaching was by the numbers and learning was by rote. The most realistic peacetime battlefield for infantrymen and tankers was still the firing range. The Army school system was bloated with overhead and infused with a similar obsolete approach to learning. Officers were sequestered in classrooms to learn the outdoor activity of war. Equally disturbing, the Army had seriously neglected noncommissioned officer training.

As its first order of business, TRADOC began a fundamental reformation of Army training. It adopted a simple and direct slogan: "An army must train as it fights." Training reform began by pushing young officers out of the classroom and into the field. Instead of studying the art of war, lieutenants learned the intricacies of maintenance and gunnery. The Army refocused from its fixation on training schedules to training to a standard—preferably one based on necessary combat skills. The "systems approach to training" was based on the proposition that even the most complex combat endeavor could be subdivided into a series of discrete individual tasks. Each task would have set conditions and a measurable standard by which soldiers' skills would be evaluated and to which the soldiers would be held accountable. The Army Training and Evaluation Program, or ARTEP, appeared in 1975 and became the principal vehicle for measuring training readiness among companies, battalions, and brigades. The objectivity of the ARTEP system did in fact expose units that looked good in garrison but failed to meet the standard in the field. But the ARTEP fell short of providing a realistic yardstick for predicting how units would perform in combat. While sums of individual skills might provide a reasonably accurate assessment of crew and section proficiency, battalion and brigade performance depended more on intangibles. Qualities like leadership and decision making, as well as the intuitive ability of leaders to sense terrain and synchronize the employment of men and weapons, were more important indicators but were difficult to measure objectively. More to the point, combat experience in previous wars indicated that a scripted, one-sided exercise like the ARTEP, no matter how objectively measured, could not adequately replicate combat conditions. Soldiers could be seasoned and tested only by subjecting them to a reasonably close approximation of real war.

Doctrinal Reform

General Depuy was a practical soldier. As such, he viewed with a healthy skepticism those who looked at the development of doctrine as a scholastic exercise. “Doctrine, or the method of war an army employs,” noted DePuy, “doesn’t work unless it’s between the ears of at least 51 percent of the soldiers who are charged to employ it.”[9] DePuy also had an almost obsessive desire to break the Army from its Vietnam malaise and “get it moving again.” As TRADOC commander, he had little influence over the budget, nor did he command units in the field. But his charter made him the conductor of a huge orchestral body that was obliged to play according to the doctrinal score he devised. DePuy’s challenge was to compose a symphony bold enough to snap the orchestra out of its lethargy and credible enough for at least 51 percent to play in tune. During his tenure, DePuy’s symphony, Field Manual 100-5, *Operations,* served as a wake-up call to the Army. But this keystone manual for Army doctrine fell far short of achieving the harmony he sought.

Intending FM 100-5 to stimulate reaction in the Army, DePuy went to great lengths to avoid sterility. Beginning in late 1973, he hosted a year of meetings with branch commandants, allies, and the Air Force. He demanded that the manual be written in simple English. Instead of the traditional tan bound publication, he published a camouflage-covered manual in loose-leaf format, both to facilitate future changes and to send a message to the field that even though it had the DePuy stamp, he intended the manual to be, the first iteration of a continuing doctrinal dialogue.

DePuy personally wrote much of the 1976 version of FM 100-5, which sought to define the fundamentals of land warfare. Not surprisingly, the manual mirrored his personal experiences and prejudices. Above all, it reflected his fixation on practical soldiering. He wanted to give the field a practical guide on “how to win the first battle of the next war.” The Fulda Gap region of the inter-German border became a familiar prospective battlefield. The manual told soldiers how to fight using weapons then in their hands. It included a detailed tutorial on the lethality, accuracy, and range of weapons on both sides to graphically impress prospective users with the precision revolution in direct fire that had made the battlefield tremendously more destructive. The October ‘73 War became the model for the first battle: short-lived, exhausting, and terribly destructive to both sides. If, like the Israelis, the American Army expected to fight outnumbered and win, it had to exploit every advantage accruing to the defender in order to hit the enemy first and with great precision. FM 100-5 reflected the value that both the Israelis and the Germans placed on the liberal use of suppressive firepower to paralyze an enemy momentarily before maneuvering against him.

The manual accepted from the Germans the value, if not the primacy, of the defense—but defense of an unconventional kind. The so-called "active defense" emphasized economy of force and the need to strike a penetrating enemy force with surprise and with carefully husbanded combat power at the critical place and time. The objective of the active defense was to halt the Soviet advance as close to the inter-German border as possible. Since the Soviet operational concept was to attack in successive armored waves or echelons, the task at hand was to kill enough Soviet tanks in each echelon to give the defenders time to regroup and prepare to face the next echelon before it came within range.

As soon as it was published, FM 100-5 became the most controversial doctrinal statement in the history of the American Army. The chorus of disharmony came principally from outside TRADOC, the most discordant from outside the Army. Criticism centered on the manual's preoccupation with weapons effects and exchange ratios and the perceived return to the American fixation on *firepower-attrition* warfare rather than the maneuver-centered focus traditionally attributed to European armies, particularly the Germans.

Within the Army, criticism tended to be more introspective and conceptual and began, albeit subtly, while DePuy was still commander of TRADOC. The light Army—those raised in the airborne and air assault family—criticized the manual for focusing on Europe to the exclusion of other theaters and other methods of war. Parochialism aside, they had a point. In Vietnam the Army had developed a method of warfare in airmobility as unique and revolutionary as German blitzkrieg had been in its day. Light Army proponents argued that future victories would increasingly be decided in the third dimension, and they saw in Vietnam the prospect of future Third World battlefields in which the helicopter would continue to predominate.

Opposition to the maestro's tactical method centered on the active defense. Many detractors perceived it as a tactic intended to avoid defeat rather than to attain victory. Lieutenant General Donn Starry, a DePuy protege, co-wrote much of this doctrine. However, after taking command of the Army corps charged with defending the Fulda Gap, he was among the first to publicly question its utility. Starry particularly did not like the math. Facing him across the inter-German border were at least four Soviet and East European tank armies arrayed in three enormous echelons of armor, infantry, and artillery. Active defense doctrine would be helpful in disposing battalions and brigades to defeat the first echelon, but Starry had neither the forces nor the time to reset the defense before being overwhelmed by the second and third. To avoid defeat, he would have to find a way to slow and weaken follow-on echelons before they arrived within direct-fire range of the main line. Starry's elevation as DePuy's successor at TRADOC in 1977 sparked the renaissance that would eventually lead to the rediscovery of operational art within the Army and the creation of AirLand Battle doctrine.

Despite the criticism, the 1976 version of FM 100-5 brought about a fundamental change in the way the Army viewed itself. Expressing that view led to a subordinate body of doctrinal literature called the "how to fight" series of field manuals, which energized the entire training and education system. As DePuy intended, FM 100-5 was a transition step that opened an intellectual dialogue throughout the Army. It set the stage for later revisions in 1982 and 1986 that introduced and refined the AirLand Battle concept which underpinned the way the Desert Storm campaign was planned and fought. Reforms that improved discipline, training, and doctrine without addressing how to attract and retain a quality force, however, were only partial solutions.

The Hollow Army

After a brief period of public support prompted by the end of the draft, the American public and Congress's interest in the volunteer Army quickly dissipated. To induce recruitment, the Nixon administration raised soldier salaries 61 percent in 1973. But in spite of large-scale inflation, salaries remained essentially frozen for seven years thereafter. Earlier pay raises were targeted toward first-term enlistees, while noncommissioned officers, considered already hooked by the system, received proportionately less. The consequent pay compression meant that an experienced sergeant earned only 30 percent more than the newest private. In real terms, purchasing power for sergeants dropped from $20,000 per year in 1973 to $14,000 by 1979. Entitlements, which military families considered essential for economic survival, lost value in proportion to pay. Moving allowances for a family of four remained at 10 cents per mile—unchanged since the Eisenhower administration. Young sergeants, in the best of circumstances barely able to make ends meet, found themselves thrown hopelessly into debt with unexpected movement orders. By 1979, the salary of junior enlisted soldiers had dropped so low that a corporal with a small family was officially below the prescribed government poverty level. In that same year Army commissaries accepted almost $10 million in food stamps.[10] The soldiers' plight grew considerably worse in Europe. As large numbers of wives streamed overseas to join their soldier husbands, the problem of poor or nonexistent housing was compounded by poverty wages. With no money to spend, soldiers and families had little to do but try to survive.

In the lean years following Vietnam, the Army created the conceptual outline for a future force fundamentally different from any American Army of the past. Accepting the mantle of steward from Weyand in 1976, General Bernard Rogers embraced Abrams' goal of creating a force consisting of 16 Active and

8 Reserve component combat divisions. At the same time, he continued to work on ways to improve soldiers' quality of life. However, while Rogers paved the way to improved readiness and worked on long-term sustainability in an effort to pull the Army out of the intellectually and physically stagnant period of the volunteer Army, his task was severely hampered by budget woes.

In the late seventies, the Army witnessed drastic cuts in funding for maintenance and training. By 1979, 6 of 10 Stateside Army divisions were, by the Army's own liberal standards of measurement, not combat-ready. Even though Europe was the Army's front line, one of the four divisions stationed there was not combat-ready. Serious shortages of qualified soldiers, spare parts, and replacement equipment grew alarmingly. The Commander in Chief, US Army Europe, General Frederick Kroesen, long noted for his frankness, confessed publicly that the European Army had become obsolescent. Kroesen and other senior officers began to speak openly of a "hollow army." Although the Army could boast 16 divisional flags, the content and quality of those divisions was diminishing rapidly.

Soldier quality, never particularly high during the early years of the volunteer Army, started another precipitous drop after 1976. The numbers recruited in mental Categories I, II, and IIIa, which measure the upper half of mental aptitude among American youth, shrank from 49 percent in 1973 to 26 percent in 1980. Only 50 percent of those recruited in 1980 had graduated from highschool.[11] Statistics for drug addiction, unauthorized absences, and crimes, while still below the immediate post-Vietnam War figures, were still alarmingly high. The Army recruited so many poor-quality soldiers during the late seventies that it dismissed 40 percent for indiscipline or unsuitability before they completed their first enlistment.

Meanwhile, in late 1979, the Islamic fundamentalists' removal of the Shah of Iran and the Soviet invasion of Afghanistan began to shake the American public from its lethargy.

Crises Open the Coffers

The failed attempt to rescue American hostages held in Iran in 1980 marked one of the lowest points in American military performance since the end of the Vietnam War. The spectacle of broken Marine helicopters and crashed Air Force C-130 aircraft and the tales that emerged from Desert One of confusion, overcentralization, poor communication, and botched planning brought to light publicly what the pros had foretold for some time. As so often happens in American military history, a military debacle was necessary to wrench the Services back from the brink of ruin.

The furor following Desert One alerted the American public to chronic institutional problems that had remained shrouded since Vietnam. The Army realized that reduced budgets had left equipment inoperative, shortened training exercises, and delayed the arrival of new weapons. The Army leadership also recognized that the Army could not achieve real combat readiness unless it could, as a first priority, populate itself with good soldiers. In the wake of Desert One, the cry grew more shrill for a return to the draft. A volunteer army, so the argument went, would only draw from the poorest and most poorly educated segment of the population. In time the Army would consist only of the socially disenfranchised. While ostensibly volunteer, the Army was still "drafting," but using economics rather than the Selective Service System to force enlistments.[12] Some pro-draft sentiment could still be found within the Army, but by and large, most Army leaders favored the all-volunteer concept. The flaw, they believed, was in how the volunteer system was implemented. The draft was over. Simply opening doors was not enough to induce quality men and women to enlist. America's youth had to be convinced that service in the Army was right for them. Needing a marketeer to sell itself, the Army found its salesman in the person of Major General Maxwell "Max" Thurman.

Thurman began his tenure as head of the Army Recruiting Command by selecting only the best soldiers to be recruiters. Instead of long-term recruiting professionals, he brought in officers and noncommissioned officers from the field for short-term assignments. Their job was to recruit the same soldiers that they would later have to train. The recruiting market moved from the streets to high schools. High school students were harder to recruit, but research proved that a diploma was the most reliable indicator of future success as a soldier.[13] Each of Thurman's subordinate commanders negotiated a contract with him to produce a certain quality of soldier in a certain number, balancing the demands of the Army against the particular demographic and economic circumstances of the region. Thurman recognized the power of advertising. With the enthusiastic support of Vice Chief of Staff General John Vessey, he convinced Congress to appropriate approximately a half-billion dollars to finance Army recruiting and bonuses. The "Be All You Can Be" campaign achieved instant recognition among American youth. Thanks to positive imagemaking and the improving quality of life within the Army, the "'Willie and Joe" image inherited from the drafted Army gave way to the Army's new image as a caring, challenging, high-tech outfit.[14] A Congress increasingly alarmed by the Army's declining readiness and sympathetic to the plight of soldiers and their families responded by increasing soldiers' salaries 25 percent between 1981 and 1982. Army research found that the most important reason for the smartest soldiers to enlist was money for college. After Congress reinstated the GI Bill and initiated the Army College Fund, the quality gap began to close.[15]

While Army recruiting continued to experience occasional growing pains, the quality of young men and women recruits steadily climbed, keeping pace with the public's increasingly favorable image of the Army. By 1991, more than 98 percent of the applicants were high school graduates. Seventy-five percent scored in the upper mental categories, less than one percent in the lowest. Fully 41 percent chose to enroll in the Army College Fund. As quality increased, traditional indicators of indiscipline dropped off the charts. Desertions and unauthorized absences dropped 80 percent and courts-martial 64 percent. Positive indications of drug abuse dropped from 25 percent in 1979 to less than 1 percent a decade later.[16]

As defense budgets increased, the temptation grew to expand the size of the Army to meet the growing Soviet threat. However, with end-strength capped at 780,000 soldiers, meeting the goal of 16 Active divisions was difficult enough, let alone trying to expand the force. General Edward "Shy" Meyer, Chief of Staff from 1979 to 1983, chose to hold the line on total numbers. He reasoned that any large increase, given the limited number of available high quality prospective recruits, would substantially lower overall quality. The most glaring shortage would be made up by the Reserves.

The political argument for greater integration of the Reserves had its roots in Vietnam. President Johnson chose to rely on the draft alone to prosecute the war in order to cause as little disruption on the home front as possible and thereby dampen popular opposition. While successful during the early years, Johnson's policy created an army in the field made up largely of the very young, the poor, and the disaffected. As the war dragged on and casualties mounted, a rift was inevitable between the people and this unfamiliar, unrepresentative body of men fighting an unpopular war. For that reason, General Abrams, during his short tenure as Chief of Staff, had insisted that the Army could not go to war again without the involvement and tacit approval of the American people. A call-up of the Reserves would bring home to Americans from the beginning that they had a personal stake in the conflict. Therefore, Abrams had sought to weave Reserve forces so inextricably into established deployment schemes that no force would be able to fight a major war in the future without them.

The creation of what was to become the Total Force Policy began gradually during the mid-seventies as the Army shifted combat support and combat service support necessary to sustain the Active Army in a large-scale European conflict into the National Guard and Army Reserve. The plan was to increase the total number of Active divisions to 16 while staying within mandated end-strength ceilings by "rounding out" selected Army divisions so that they consisted of two regular and one Reserve component brigade. A number of separate Reserve component battalions were also included in the roundout program. Roundout brigades were expected to join their parent division after a period of muster and postmobilization training, which was originally postulated to require at least 30 days. By the late eighties, the Total Force Policy triad had been so firmly embedded in the Army's structure that 52 percent of combat forces and 67 percent of other forces were Guard or Reserve. Seven Reserve component brigades—six from the National Guard and one from the Army Reserve rounded out Active Army divisions, while 10 separate battalions, all in the Guard, served additionally as roundout augmentation to the Active Army.[17]

The Big Five

While General Abrams committed the Army to producing world-class soldiers, he also sought to develop first-class materiel. Following Vietnam, the obstacles to achieving that commitment were seemingly insurmountable. The Soviets had exploited the Army's Vietnam diversion to close the gap in weapons technology. Popular opinion at the time did not appear to favor significant funding increases for new weaponry. Since the Army traditionally spent proportionately more than the other Services on people programs, not enough developmental money was available to buy every weapon the Army needed. The Army was fortunate to have Abrams at the helm. He was an officer who continued to maintain the trust and respect of Congress and the public through the Army's troubled times. He had a congenital distrust of Pentagon bureaucracy. Perhaps his obvious discomfort with Washington w as one reason Congress listened to him so attentively. Abrams drew copiously from this wellspring of political credibility to rebuild the Army, but first he had to deal with the bureaucracy.

The Army materiel development community consisted of dozens of constituents, all of whom believed that their particular weapon or program deserved funding priority. Legions of young officer-analysts labored intently to produce tightly argued, amply documented justifications to prove the worth of their particular systems. However, even within each community, opinions varied. To Abrams, the Army seemed reluctant to make up its mind or to keep to an established course once it made materiel decisions and only he could discipline the process. He began by selecting five weapons the Army had to have: a new tank, an infantry fighting vehicle, two helicopters—an attack helicopter and a utility transport to replace the ubiquitous Huey of Vietnam fame—and an air defense missile. Other programs would be proposed and some would ultimately survive Congressional scrutiny, but having put his reputation on these Big Five, Abrams would tolerate no further dissension within the Army.

As the development of the Big Five weapons systems began dining the period of constrained military budgets, Abrams' successors continued to fight to keep the programs alive. With the efforts in recruiting, training and doctrinal reforms, and new weapons systems all running concurrently, Army leaders continued to seek better ways to bring all of these improvements together.

Birth of the Combat Training Centers

Studies of combat experience in World War II, Korea, and Vietnam revealed a disturbing propensity for units to suffer very high casualties in their first exposure to direct combat. The problem was particularly perplexing because the human cost in first battles did not seem to be lessened by the time spent in training prior to deployment. Some divisions like the 90th prepared for war in Europe for more than two years, yet suffered more than 100 percent casualties in the hedgerows of Normandy. A method was needed in peacetime, as DePuy had noted, to steepen the seasoning curve without paying in blood. Curiously, the Navy showed the Army how to practice fighting for real. In early air-to-air combat over Vietnam, Navy pilots achieved a kill ratio against North Vietnamese MiGs of only two to one. A careful study showed a seasoning curve increase for pilots after combat as dramatic as Army studies had found for ground soldiers. Forty percent of all pilot losses occurred in their first three engagements. However, 90 percent of those who survived three engagements went on to complete a combat tour. In 1969 the Navy began a program that sought to provide a pilot his first three missions risk-free. *Top Gun* pitted novice airmen against a mock aggressor skilled in North Vietnamese aerial tactics. Combat was bloodless yet relatively unfettered. Uncompromising instructors recorded and played back every maneuver and action. The results were dramatic. From 1969 until the end of the air war, the Navy's kill ratio increased sixfold.

A similar method of battle seasoning was needed for Army training, and General DePuy handed the task to his TRADOC deputy chief of staff for training, Major General Paul Gorman. However, technological problems in creating a ground-based *Top Gun* were daunting. Aircraft came equipped with their own onboard radars and computers. Aircraft instruments could easily be linked to ground-based sensors to track and record every aerial track and maneuver for later playback and critique. But how do you keep track of thousands of soldiers shooting at each other among the folds and foliage of normal terrain? Gorman again got the answer from the Navy. In 1973, he discovered a young technician who was experimenting with a method for sailors to practice marksmanship indoors. The technician simply attached a laser to a pistol and fabricated a laser-sensitive target to record hits. Gorman expanded the "laser pistol" idea into what eventually became the Multiple Integrated Laser Engagement System (MILES) with devices that could be attached to all weapons from rifles to tank guns. MILES was a sophisticated version of the "laser pistol" concept that used coded signals to record kills and to discriminate among the types of weapons firing so that rifles "killed" only soldiers and not tanks. To replicate the Navy's successful program, planners had to devise an instrumentation system capable of tracking units, vehicles, and individuals and linking them all together through a master computer. The Core Instrumentation System (CIS) that evolved for the National Training Center utilized state-of-the-art technology with video cameras and multiple radio monitoring stations.

To exploit the promise of MILES and CIS, Gorman pursued an Army version of *Top Gun*, which was ultimately created at Fort Irwin, California. The exercise area was vast, and MILES permitted combat units to be pitted against each other in relatively free-play, force-on-force engagements. An observation center equipped with CIS near Fort Irwin kept track electronically of MILES kills, individual vehicle movement, and radio transmissions from the evaluated units. The center resembled a dimly lighted video arcade with monitors and television screens depicting real vehicles engaged in mock combat. Elaborate data-processing equipment provided instantaneous information on unit locations, troop concentrations, heavy weapons positions, the number of shots fired by caliber, and hits and misses. Remote-control cameras located on mountaintops provided total video coverage of the battle area. Observer-controllers accompanied every unit throughout the rotation, unobtrusively recording actions that were then combined with electronic data for the after-action reviews (AARs).

The resounding success of the National Training Center was the result not so much of its technology, but of the effect of its real-world, real-time, no-nonsense combat simulation on how the Army prepared for war. Each successive iteration or rotation of a unit through the NTC experience increased that unit's ability to survive and win in combat. The experience was grueling indeed and often, at first, very humbling. The opposing force, or OPFOR, regiment that daily hammered the novice commander was finely practiced in Soviet tactics and offered no quarter. Four hours after each instrumented engagement, leaders of the evaluated unit faced the harsh realities of watching their performance played back during an AAR. The conduct of an AAR embodied, perhaps more than any other single event, the commitment of the Army to no-nonsense training. In silence, each commander watched on video as the observer-controller dispassionately explained, vehicle by dead vehicle, how the OPFOR took the unit apart. The observer-controllers did not intend the AAR to be cruel. Units that did not do well were not necessarily bad units; the more numerous and highly skilled OPFOR was tough to beat. The AAR simply brought home to every leader the realities of combat. Lieutenant General Frederick Brown, former deputy chief of staff for training at TRADOC, saw the AAR process as the "truly revolutionary characteristic of the NTC." There was no precedent for exposing a unit's chain of command to a no-holds-barred battle against an OPFOR where a leader's failure was evident in exquisite detail to his subordinates. "No army—including the Israeli army—has dared to do this," Brown said.[18] After leaving the briefing van, the commander knew whether his skill at drawing arrows on the map was equaled by his ability to infuse his soldiers with the confidence, leadership, and combat skills necessary to make his battle plan work in the harsh, unforgiving world of real combat. Almost a decade of continuous exposure to NTC and other derivative exercises at the

Joint Readiness Training Center at Fort Chaffee in Arkansas and the Combat Maneuver Training Center at Hohenfels in Germany infused in field commanders an institutional obsession to train realistically for combat. With each successive rotation, the Army moved inexorably and bloodlessly a notch higher along the combat learning curve.

In 1984, *America's First Battles*, a volume produced under the auspices of the Army Command and General Staff College (CGSC), Fort Leavenworth, Kansas, appeared and caused an instant stir among senior leaders throughout the Army. The final chapter concluded what American soldiers had known intuitively for some time. The American Army performed poorly in the opening battles of all its wars not so much because of poorly prepared soldiers but because senior leaders—division and corps commanders—were not up to the task of commanding and controlling large units in the field. Lieutenant General Jerry Bartlett, then commander at the Combined Arms Center and CGSC, believed that this problem could be substantially solved by applying the learning curve to generals as well as privates. What the Army needed was an NTC-like experience for generals and their staffs. Divisions and corps were too large to be routinely placed in the field to conduct realistic force-on-force combat. Therefore, the Army created a computer-driven OPFOR to be manned by experienced controllers capable of electronic force-on-force interaction. To put as much of the fog of battle as possible into the Battle Command Training Program, or BCTP, the simulation was taken to units in the field so that the war game could be played using the tested division's headquarters staff and communications equipment. Whenever possible, Bartlett's controllers would exercise the division's existing war plans.

BCTP would provide the same realism, stress, and harsh, objective reality for generals and their staffs as NTC provided for colonels. The problem was the dreaded AAR. Holding colonels accountable for their errors in front of troops was difficult enough, but what about generals? The Army solved the dilemma by bringing in three retired four-star generals, each known and respected throughout the Army as experienced war fighters, to supervise the exercise. Initially, the Army in the field balked at such frank exposure. However, General Carl Vuono, then Chief of Staff, insisted that the BCTP continue.[19]

Unit-level training is the focus of the NTC, the ARTEP, and the BCTP. Units and their leaders perform mission-essential tasks that can be observed and evaluated against measurable standards under specific conditions. Within units, the leadership skills required by increasingly sophisticated weapons systems and training tools called for a simultaneous revamping of the Noncommissioned Officer Education System (NCOES).

The Noncommissioned Officer Education System

In late November 1990, Command Sergeant Major of the Army Julius Gates accompanied General Vuono to the Soviet Union at the invitation of General Valetin Varennikov, the Soviet Ground Forces Commander-in-Chief and a hero of the battle of Vilnius in World War II. Near Kiev, Vuono, Gates, and another Soviet General, Boris Gromov, stood together as they watched two young Soviet officers lead a platoon of trainees through a demonstration of close-order drill. Soviet officers did not quite know what to make of Gates. A master paratrooper and a Ranger, Gates' many years with light infantry units had kept him trim and fit. Yet the sight of a sergeant purported to be a personal advisor and confidant to the highest-ranking officer in the Army seemed incongruous to them, to say the least. Gates was not terribly impressed with what he saw. As the soldiers wheeled about in intricate evolutions, Gates turned to Gromov, pointed to the officer drillmasters, and remarked dryly, "You know, in our army sergeants would be doing that—junior sergeants."

"Yes, I know," the Soviet replied through an interpreter. "That's what makes your army so good. We use officers because we don't have sergeants like you."

Soldiers have long recognized that sergeants are the backbone of an army, particularly the American Army, which has traditionally given noncommissioned officers a great deal of authority and responsibility. But 10 years of war in Vietnam damaged the NCO Corps physically, morally, and psychologically—more than any other segment of the institution. The strain imposed by back-to-back combat tours in Vietnam exacted a terrible toll on young NCOs. Tens of thousands died or were wounded, and many more left the Army frustrated and fatigued as soon as their hitch was up. Morale continued to plummet after the war. NCOs found themselves in an unfamiliar army where the message to new volunteer soldiers was not one of discipline and combat readiness but rather "the Army wants to join you." Pay compression made NCOs almost as poor as their privates. Those who remained stood by and watched anxiously as their authority steadily eroded in a progressively more permissive and ill-disciplined environment.

The near ruin of the NCO Corps during Vietnam caused the Army leadership to take a careful look at how the Army developed noncommissioned officers. Without a comprehensive schooling system, NCOs were expected, for the most part, to learn on the job. In 1969 General William Westmoreland, at the urging of his Vice Chief, General Ralph Haines, had instituted a system of NCO training and selection that in many respects paralleled the officer system.

The concept called for four levels of training. The primary level was similar to the old NCO academies. Basic and advanced levels required board selection for attendance and included advanced skill development balanced with a strong dose of leadership and training evaluation. The fourth and highest level was the Sergeants Major Academy founded at Fort Bliss, Texas, in 1972. The Academy curriculum paralleled that of the Army War College, and selection became as highly prized among senior NCOs as the War College has traditionally been among officers. The NCOES added rigor to NCO career development. A sergeant had to prove himself to his leaders in order to advance to each level, and at each level he learned the skills necessary to succeed at the next higher grade.

As the NCOES produced better sergeants, the trust of officers in their NCOs returned in full measure and then began to grow. With trust came increased responsibility and in turn confidence began to reappear among the "new breed" of well-trained and well-educated NCOs. As pay and quality of life for NCOs improved, so too did the quality of the NCOs themselves. Of the SMA's first graduating class in 1973, fewer than 8 percent had attended college. Of the soldiers who joined the Army that year and who rose through the ranks to attend the academy 18 years later, 88 percent had attended college; nearly half had earned degrees.[20] In addition to education, the NCO Corps maintained with equal strictness standards for job performance, personal conduct, physical fitness, and, most importantly, demonstrated leadership ability. By the time units deployed for Desert Shield, the transformation of the NCO Corps was virtually complete. Sergeants performed in the desert with unequaled initiative, professionalism, skill, and concern for soldier welfare. Brighter, better educated NCOs also required the best possible officer leaders.

Airland Battle Doctrine

Most of the Army's senior leadership, with General Starry in the lead, had grown increasingly uncomfortable with the 1976 version of FM 100-5. In 1977, a year after taking command of V Corps, Starry stood on the Golan Heights looking east toward Damascus as Israeli General Rafael Eitan explained how, in the desperate hours of October 6,1973, he watched as waves of Syrian tanks formed successive echelons as far as the eye could see.[21] Although force ratios clearly called for the Syrians to win, they lost because of *intangibles.* To Starry, the battle of Kuneitra proved conclusively that the side that seized the initiative and demonstrated superior fighting skill and determination would prevail.

The Soviet invasion of Afghanistan in 1979 underscored to General Meyer that Europe might not be the only probable future battlefield. Meyer was particularly concerned that fixation on the active defense, whether intended or not, might affect the morale and fighting spirit of young officers. General Richard Cavazos had a heightened respect for unquantifiable aspects of warfare that FM 100-5 tended to ignore. Commander of Forces Command (FORSCOM) at the time, Cavazos spoke about the value of leadership, courage, endurance, and will as principal determinants of combat effectiveness: "What's important is how soldiers, not systems, fight."

The 1982 version of FM 100-5, for the first time, moved decisively away from force ratios to intangibles as predominant factors on the battlefield. It listed leadership as an element of combat equal to firepower and maneuver and went on to underscore the validity of training, motivation, and boldness—the ability to perceive opportunity, to think rapidly, to communicate clearly, and to act decisively. The success of AirLand Battle depended on four basic tenets: *initiative, depth, agility,* and *synchronization,* each demanding as much from the intellect of the commander as from the physical power of his force.

The 1982 manual also introduced AirLand Battle doctrine. General Glenn Otis, Starry's successor as TRADOC commander, recognized that the size and complexity of the air and land battlefield had outgrown the narrow tactical focus that DePuy had imposed on Army operations in FM 100-5. Otis chose, therefore, to introduce the operational level of war in the 1982 version as an intermediate level between tactics and strategy. By the time the Army developed the 1986 edition, AirLand Battle had become synonymous with the operational level of war.[22]

AirLand Battle doctrine sought to find a method for defeating second- and third-echelon forces. A defending force waiting passively for the enemy to appear would be swept aside by successive Soviet echelons. In order to have any chance of winning against such unfavorable odds, the defender would have to seize the initiative by attacking follow-on echelons before they appeared. The manual proposed two methods of attack. The first was to use distant fires and electronic warfare to slow, confuse, and damage as many early arriving forces as possible, executing distant strikes in a carefully conceived pattern. The object was to create gaps in the enemy's battle array that could then be exploited with the second means of attack: lightning-fast offensive maneuver using mechanized forces supported by tactical air power and attack helicopters. Fires became, therefore, not merely a means to attrit the enemy, but also a mechanism for setting the terms of battle. Fires would freeze the enemy and stun him long enough for maneuver forces to strike deep to destroy following echelons.

The imperative to strike deep forced the writers of FM 100-5 to observe the battlefield from a higher perspective. In the 1976 version, the view from the division commander's perch, essentially a tactical view, was high enough to observe the direct fire-fight at the point of collision between two opposing forces. But to see and strike echelons not yet committed demanded a higherlevel perspective. In terms of time and space, three echelons attacking in column formation occupied ground to a depth of 150 kilometers and required about three days to close on the point of contact. In 1982 the maneuver commander had few weapons or means of observation capable of reaching that far. The Air Force, however, did have a deep capability, so the need to extend the battlefield and strike deep gave the corps commander an even greater interest in how air power was employed. Since World War II, the Air Force had considered aerial deep attack, or interdiction, to be an essential mission, but they had not, in the past, so closely linked the interdiction effort to the corps commander's maneuver scheme. However, the Air Force did accept the Army's contention that success on the ground depended on deep strikes to shape the battlefield. Beginning in 1979, the Tactical Air Command at Langley Air Force Base, Virginia, and TRADOC headquarters, just 20 minutes away, began to develop a joint doctrinal vision that included a system for Army fires to suppress enemy air defenses and air interdiction (AI) to attack the second echelon.

In 1984 General John Wickham and General Charles Gabriel, the Army and Air Force Chiefs of Staff, announced the acceptance of 31 initiatives specifically designed to enhance joint employment of AirLand Battle doctrine. The initiatives resulted from a year of discussions, war-gaming, and intellectual free-for-alls by members of a joint force development group. The group's charter, simply stated, was "to create a means to design and field the best affordable AirLand combat force."[23] A focal point of their effort was to reach an agreed method for using air interdiction as an integral part of combat power. As a result, the group redefined air interdiction as an attack on targets beyond the corps commander's area of interest and established a new category, battlefield air interdiction (BAI). Initiative 21 stated in part that BAI was:

> Air action against hostile surface targets nominated by the ground commander and in direct support of ground operations. It is the primary means of fighting the deep battle at extended ranges. BAI isolates enemy forces by preventing their reinforcement and supply and restricting their freedom of maneuver. It also destroys, delays, or disrupts follow-on enemy units before they can enter the close battle....[24]

Operational art and the increasing importance of joint operations demanded more from commanders and their staffs than ever before. As these demands increased, so would the need for educating officers more capable of understanding and applying the new concepts.

School of Advanced Military Studies (SAMS)

General William Richardson was commandant at the Command and General Staff College during the period when the 1982 version of FM 100-5 was being written. He lamented the Army's system of officer education, which had not adequately provided the intellectual rigor necessary to grapple with the complexities of the operational level of war. The intellectual ferment surrounding the birth of the new doctrine rekindled interest throughout the Army in military history as the most practical laboratory for learning the art of war and applying intangibles to its execution. The result was a concept, first offered in 1981, to create an advanced second-year course for a small, select group of perhaps 50 first-year graduates of CGSC. They would study the art of war in an intensive program of reading military history, practicing computer war games, and writing extensively. Recitations in class would be scrupulously critiqued by their peers and a faculty selected for their own intellectual acumen and knowledge of military history.

Instituted in 1983, SAMS was so rigorous that it initially overwhelmed its students. Long hours of concentrated study and intense pressure to perform led some students to wonder if this "academic Ranger school" was really worth the effort. To avoid any appearance of elitism, graduates received no special favors other than a guaranteed position in division- or corps-level staffs. As its motto SAMS adopted the unofficial maxim of the German general staff, "Be more than you appear to be," and the director admonished graduates that they must be an elite with a humility that bears no trace of elitism.[25] The intention of the program to infuse a common body of thought—a common *cultural bias*—throughout the Army by means of its graduates worked beyond anyone's expectation.

By the time the Gulf War began, SAMS graduates had established a reputation as some of the best staff officers in the Army. They were present on all planning staffs and were heavily involved in the conception, development, and execution of the strategic and operational plans that would win the war so convincingly.

Light Forces Renaissance

Despite the focus on armor and mechanized forces fighting on the Central European plain, which had been sharpened by the October 1973 Arab-Israeli War, the Army could not ignore light and Special Operations forces. General Abrams recognized the value of highly trained and disciplined light infantry when he instituted the formation of two Ranger battalions in 1974. He intended to create a core of light fighters that would set the standards for the rest of the Army. The 1-75th Infantry (Ranger) was formed at Fort Stewart, Georgia, and the 2-75th at Fort Lewis, Washington. Many Ranger-qualified soldiers actively sought assignment to these tough units that they knew to be bastions of discipline and pride.

As the seventies progressed and terrorism increased, the Rangers and other Special Operations forces received more attention. The Army described a spectrum of conflict that compared the likelihood of engagement in combat to the risk or magnitude of danger. The high risk of total war up to and including nuclear holocaust seemed less likely than terrorism and brush wars at the low-risk end. This model argued for balance at both ends.

The Ranger battalions did indeed set the standards throughout the Army for training, physical fitness, and discipline. Parallel to the resurrection of the Rangers, the Army's Special Forces also underwent a renaissance to throw off the lethargy of Vietnam. Expanded several times over during that conflict, the Special Forces had lost the professional edge that had made them such an elite force. Like other elements of the Army, the Green Berets returned to basics—in their case, teaching indigenous forces to fight unconventional wars. After Desert One, the role of Special Forces expanded considerably to include counterterrorism and difficult direct-action missions that required specialized equipment and training.

In 1980 General Meyer established the High-Technology Test Bed in the 9th Infantry Division at Fort Lewis. Meyer's idea was to increase the mobility and firepower of the division while simultaneously making it smaller and lighter. Technology would cover the combat power gap created by smaller size and greater deployability. During its early years, the 9th Infantry Division under Major General Robert Elton, and later under Major General Robert RisCassi, tested emerging equipment in the midst of its development cycles, bought off-the-shelf items, and restructured itself to test Meyer's concept. Shortly after becoming Chief of Staff in 1983, General John Wickham carried Meyer's initiatives one step farther with the creation of light infantry divisions. Driven by the shortage of airlift, the high likelihood of conflict at the lower end of the risk spectrum, and the constrained end-strength of the Army, Wickham foresaw an ascending role for light divisions. These divisions would not replace the heavy force, but would increase responsiveness and provide a complementary force optimized to fight where heavy armor and mechanized units could not go.

Urgent Fury

The first signs of progress in the long climb back from the abyss of Desert One occurred three years later with the airborne coup de main in Grenada, code-named Urgent Fury.[26] Many of the structural problems that plagued the Iranian rescue operation also plagued Urgent Fury preparations. Useful intelligence was practically nonexistent. No agents were on the island, and hastily dispatched electronic and photographic collection platforms provided very little tactical information. To command the operation, US Atlantic Command, headquartered in Norfolk, Virginia, quickly created a joint task force. This arrangement placed the fighters—Army, Air Force, Marine, and SEAL combat elements—under a naval command equipped with incompatible communications and largely inexperienced in Army-Air Force planning and operational methods. In addition, the physical separation of the joint command from ground combat on Grenada would inevitably lead to numerous miscommunications and delays.

Tens of thousands of sailors, marines, soldiers, and airmen were ultimately involved in the Grenada operation. Nevertheless, as so often happens in war, responsibility for victory fell almost exclusively to a small body of fighters: five companies, each consisting of 50 to 80 Army Rangers, a few Army Special Operations commandos; and a handful of Air Force AC-130 Spectre gunships.

On the evening of October 24, 1983, Lieutenant Colonel Wes Taylor, commander of the 1-75th Infantry (Ranger), took off from Hunter Army Airfield, Fort Stewart, Georgia, with four MC-130 aircraft en route to Grenada. A late departure left Taylor with, at best, only 30 minutes of darkness over the objective, the airport at Port Salines. His only reference to the battlefield was a vaguely legible black-and-white photocopy of a British Ministry of Overseas Development map. His mission was to clear the runway at Salines to allow follow-on forces to land. At takeoff, the situation at Salines was so poorly developed that he could not tell his soldiers what resistance to expect. He could not even tell them whether they would parachute into the objective or land on the runway. Not until he was in the air an hour out did Taylor learn that the Cuban defenders at Salines had scattered barrels and road-grading equipment across the runway. The Rangers would have to jump. Flying in the dark and stuffed 45 to each aircraft, the Rangers began harnessing parachutes and snapping 150 pounds of parachute, kit bags, rucksacks, and weapons containers onto their bodies.

A mile short of the island, a searchlight illuminated Taylor's aircraft, which was flying at only 500 feet. The C-130 was so low that guns emplaced on the heights above Salines airstrip fired red and green tracers at it horizontally. Taylor's planeload jumped out into the pyrotechnics and seconds later slammed onto the airstrip only to endure a crescendo of automatic weapons fire from angry Cubans entrenched in the hills all around them.

During the next two hours, a handful of Rangers set about clearing obstacles from the runway and assaulting the Cuban defenses. Captain John Abizaid, commanding Taylor's A Company, charged the heights to the east of the runway. Rangers shouted in Spanish to the Cubans to surrender; the Cubans replied with bilingual obscenities and increased fire. To reach the high ground, Abizaid needed a tank. Sergeant Manous Boles provided one in the form of a Cuban bulldozer that he found on the runway and hot-wired on the spot. Boles raised the blade for protection, slouched in the driver's seat, and charged his unlikely armored vehicle toward the enemy. Other Rangers crouched behind the blade and fired in every direction. When they reached the top, the Cubans were gone. By midmorning the airfield was secure.

Two days later, Rangers rescued American medical students trapped by the insurgents at the Grand Anse campus some distance up the coast. This time the mission fell to the 2-75th Infantry (Ranger) commanded by Lieutenant Colonel Ralph Hagler. Major General H. Norman Schwarzkopf, at the time the Army advisor for operations, suggested a joint heliborne operation using Marine helicopters aboard the USS Guam—the surest way to reach the students quickly with the least risk. While Marine and Navy staff officers argued the wisdom of this course of action, Hagler and Colonel Granville Amos, commander of the Marine helicopter squadron, sat down on concrete blocks in the hot sun at Salines and developed a simple plan of assault. They coordinated preparatory fires by Navy A-7 fighters and Air Force AC-130 aircraft placing 105mm cannon fire into buildings surrounding those that sheltered the students. The operation went exactly as Amos and Hagler had planned. Marine helicopters landed the Rangers while CH-53 helicopters followed immediately and rescued the 233 medical students and American citizens. The complete operation, from first arrival to last departure, required only 26 minutes.

The next day Hagler's Rangers conducted a second successful airmobile assault against a Cuban barracks complex at Calivigny. In all, the Rangers accomplished most of the combat tasks on Grenada at the cost of 8 killed and 69 wounded. Grenada succeeded, thanks to the bravery and competence of ground soldiers and in spite of flawed operational planning and an incomplete integration of land, sea, and air forces.

From the deck of the admiral's flagship, General Schwarzkopf watched the operation unfold with mixed emotions. On the one hand, he grew increasingly frustrated—and at times furious—with the difficulties inherent in conducting such a complex operation on such short notice with Services so little acquainted with each other. On the other, the performance of the infantry soldiers at Salines and Grand Anse reinforced his lifelong belief that great soldiers were the single most important ingredient in victory. "We need to focus on the fundamentals, the values of the battlefield, and the standards and discipline of our soldiers," Schwarzkopf remarked after the battle, "because Grenada, once again, proved that even though higher headquarters screws it up every way you can possibly screw it up, it is the initiative and valor on the part of the small units, the small-unit leadership, and the soldiers on the ground that will win for you every time."[27]

Changes Begin to Take Hold

Urgent Fury gave the Army a renewed sense of pride and accomplishment. Rangers appeared on national television at the Army-Navy football game halftime show at the Rose Bowl in December 1983 drawing thunderous applause and well-deserved respect. Abrams' Ranger battalion idea had not only taken root but had grown into a fighting force vindicated in battle. The 82d Airborne Division shared the spotlight along with the Army's 160th Aviation Battalion (Special Operations). This sense of well-being came at a time when the ground was ripe to replant the fundamentals and values referred to by General Schwarzkopf.

General Wickham put a distinctive stamp on this effort when he and Secretary of the Army John Marsh instituted a series of yearly themes that emphasized such subjects as leadership, the soldier, and the family. By emphasizing a different theme each year, the Army kept values in front of everyone's eyes as programs and policies were implemented to strengthen that theme. Direct measurement of progress was difficult, but the emphasis on ethics and soldierly values like courage, competence, candor, and commitment became bywords in the lexicon of leadership in the mid-eighties.

The infusion of defense dollars and the renewed focus on values needed at least three years of gestation before they began to produce clearly recognizable results in the field. Arthur Hadley, a syndicated reporter and long-time observer of the military, began to notice the turn-around as early as 1982. Often, indicators were subtle. A group of German civilians in Bad Mergentheim noted that American vehicles no longer drove across planted fields and orchards or knocked corners off buildings. In 1984 a German panzer colonel noted an "unbelievable" jump in combat proficiency by an American tank battalion attached to his regiment. Hadley noted that vehicles no longer littered German roadways during exercises. He met tank crewmen with as many as eight years' experience and these crewmen knew their jobs: "In 1985 most of the tanks one saw broken down beside the road had soldiers with tools working on them, while others directed traffic. Four years before, there were far more broken-down vehicles and soldiers were sitting on them smoking."[28]

More tangible indicators demonstrated improvements in combat readiness. In 1987 an American tank crew from the 4-8th Cavalry won the Canadian Army Trophy for the first time in 24 years. The superior fire control of the M-1 tank, combined with imaginative use of simulators for training, gave Americans the advantage in this NATO competitions That same year, a team from the llth Armored Cavalry Regiment broke German dominance of the Boeselager reconnaissance team competition for the first time. At the National Training Center, units on their third or fourth rotation began to beat the OPFOR-consistently. Some units, in fact, became famous throughout the Army for their skill at "fighting outnumbered and winning."

Just Cause

After 15 years of reform, the Army considered its transformation from a mass conscripted force to one of long-service professionals virtually complete. In the interim since Urgent Fury, the Congress had taken a hand in military reform with the passage of the Goldwater-Nichols Act in 1986. The new law was intended to improve the conduct of joint operations, strengthening the positions of the Chairman of the Joint Chiefs of Staff (JCS) and the operational CINCS. The first test of the new law came with the invasion of Panama on December 21, 1989. Tensions in the region had mounted rapidly in late 1989 with assaults on American soldiers and civilians and growing evidence of dictator Manuel Noriega's support of drug traffic. In response, the President decided to execute Just Cause, an operation that would dramatically showcase the Army's growing professional competence. The brief campaign against Manuel Noriega and his band of thugs is important to the story of Army reform because it demonstrated the operating techniques and military principles that would be proven again on a greater scale in Desert Storm. The President retrieved General Thurman, former chief of Army recruiting and later Army Vice Chief of Staff and TRADOC commander, just short of retirement to be his man-on-the spot in Panama. Immediately after arriving at his headquarters in Quarry Heights, the new Commander-in-Chief, Southern Command, made it absolutely clear that he was in charge. Thurman arrived prepared to fight a campaign. A veteran paratrooper himself, he placed responsibility for executing a military option on his friend, Lieutenant General Carl Stiner, commander of XVIII Airborne Corps at Fort Bragg, North Carolina. Stiner was the right man for the job. Any action against Noriega would be a joint operation; Thurman would command regular and special operations forces from four Services. Stiner, who had extensive experience in joint commands and had accumulated more practical knowledge of special operations than any general in the Army, became commander of joint Task Force South.

Thurman and Stiner planned an enormously intricate joint coup de main—the most detailed, complex assault of this sort since World War II. It included simultaneous airborne operations against 27 objectives spread across the country—and all conducted at night. Many of the assaulting units would fly directly into battle, almost 1,500 miles from garrisons in the United States. The plan was a complex and compressed "takedown" operation intended to smother the Panamanian Defense Force (PDF) and wrest control quickly. That way, civilian and military casualties and collateral damage would be minimized.

The medley of available forces included Army Rangers, Special Forces, and troops from three divisions: the 82d Airborne from Fort Bragg, North Carolina, the 7th Infantry (Light) from Fort Ord, California, and the 5th Infantry (Mech) from Fort Polk, Louisiana. The 193d Infantry Brigade permanently garrisoned in Panama provided a substantial portion of the Army's combat strength. The Air Force provided airlift as well as fire support from F-117 Stealth fighters and AC-130 Spectre gunships. The Navy provided special SEAL teams and the Marines stationed in Panama would act as a blocking force.

All players would be tied together through the use of a single, compact list of communications frequencies and call signs. Units in Panama would conduct repetitive rehearsals in full view of the enemy, both to hone their troops to a sharp edge and to "cry wolf" so many times that they would not alert the Panamanians when the real operation began.

By the time the President authorized Just Cause, many of the soldiers tagged for the operation had been through real or simulated versions of the exercise many times. They were accustomed to operating autonomously, and they were trained to take charge even when left virtually alone. Finally, the joint command had good intelligence. It knew where each enemy unit was located and infiltrated US Special Operations forces ahead of the main assaults to keep an eye out for unexpected movements.

Operation just Cause played out almost exactly as planned. Prior to H-hour, midnight, December 20, 1989, Special Forces soldiers infiltrated key facilities in and around Panama City. One team blocked a mechanized task force crossing the Pacora River bridge to the city to join the fight. This team engaged the task force with AT-4 antitank rockets and called in fires from Spectre to hold the bridge against heavy odds. Task Force Bayonet, consisting of the 193d Infantry Brigade reinforced by the 5th Infantry and by light tanks from the 82d, attacked Noriega's headquarters, the *commandancia*, with a phalanx of armored infantry carriers supported again by Spectre gunships circling overhead.

Three minutes after H-hour, two battalions of Rangers dropped out of the night to seize Rio Hato Airfield some 50 miles west of Panama City and to neutralize two companies of PDF. After three minutes of assault fire by Spectre gunships, another Ranger battalion dropped on Tocumen International Airport to seize the control tower and capture PDF forces nearby. Fifteen minutes after H-hour on the Atlantic side, a task force of paratroopers secured key facilities, including vulnerable canal locks and machinery. A small force secured Madden Dam in the center of the Canal Zone and, after a brief firefight, rescued 20 political prisoners Noriega had locked up nearby in Renacer Prison.

Forty-five minutes after H-hour a brigade of the 82d Airborne Division began parachuting into Tocumen International Airport to assault Panamanian army and air force elements defending there. An ice storm at Fort Bragg hindered loading and takeoff, delaying the arrival of follow-on troops three hours. However, after landing, the follow-on paratroopers quickly transferred to 18 waiting Blackhawks, escorted by Apaches, to conduct three coordinated air assaults on Panama Viejo, Fort Cimarron, and Tinajitas army barracks. The three hours' delay transformed a relatively safe night landing into a daylight combat assault against the elite PDF Tiger Company occupying Tinajitas barracks. The Blackhawks took numerous hits as they dropped soldiers into the landing zone some 400 meters from the barracks complex. In stifling heat, the paratroopers pushed forward. When they arrived at the garrison walls, the enemy soldiers had fled, leaving most of their equipment behind. The PDF command and control structure and most PDF units were neutralized by H-plus-10 hours. The PDF were simply smothered by unseen attackers from every direction and in every dimension. While they had expected battle, they did not expect to be confronted with such a simultaneous display of overwhelming force.

The Army would repeat the success of Just Cause again in the Iraqi desert barely more than a year later. Just Cause presaged Desert Storm in several important respects. First was the growing confidence among the Army leadership that the newly minted generation of high-quality soldiers could be relied upon to execute even the most dangerous and difficult missions. Second, Just Cause indicated to field commanders that the President and his national security advisors would give them wide latitude to conduct the operation. The operation demonstrated again the imperative that victory must be won quickly with overwhelming force to ensure minimum casualties.

From the tactical perspective, Just Cause demonstrated that joint operations were not only possible but imperative in future wars so long as all units involved could talk to each other and operate together under a single chain of command. Precision weapons proved worthy of the extra cost in Panama because of their unique ability to take out military targets discretely while reducing collateral damage to surrounding civilian facilities. Night operations are the most difficult to execute, but when executed with competence, achieve the most decisive results at least cost. The soldiers' performance in night combat vindicated the Army's commitment to, and substantial investment in, expensive night vision technology for ground soldiers and aviators. Just Cause showed what a combat multiplier psychological operations (PSYOP) can be when fully integrated into the tactical plan. PSYOP induced bloodless surrenders and prevented needless casualties on both sides.

Just Cause also foretold the problems that the Army might have after Desert Storm in supervising humanitarian assistance, restoring order, and rebuilding damaged infrastructure. In fact, postconflict headaches in both wars would last considerably longer and would require a great deal more effort than generals ever imagined. Before the shooting stopped, soldiers in Panama found themselves guarding prisoners of war, distributing food, and walking the beat in Panama City as surrogate policemen. Soldiers ran a displaced persons camp as well as 20 food distribution sites and contributed free medical assistance to more than 15,000 Panamanian citizens. As in Grenada, the transition from warrior to humanitarian was made smoothly by superb young soldiers, many of whom had been standing on the freezing tarmac at Fort Bragg just a few hours before. Only the very best could have pulled off what was "the largest, most sophisticated contingency operation conducted over the longest distances in the history of the US armed forces. It succeeded because of tough young soldiers, sailors, airmen, and marines."[30]

Evolution Not Revolution

Shortly after the Gulf War, the Senate Armed Services Committee asked Major General Barry McCaffrey, commander of the 24th Infantry Division (Mech), how the war was won in only 100 hours. He replied, "This war didn't take 100 hours to win, it took 15 years." McCaffrey's sentiments reflects those of his generation who as young soldiers watched the Army fracture in Vietnam and who devoted most of their adult lives to the task of reforging the institution through a remarkable process of evolutionary reform. All of the Services regenerated themselves during the Reagan years, but Army reform differed from the other Services in two important aspects. First, at the time of greatest institutional crisis immediately after Vietnam, the Army was obliged to fundamentally change its character from the mass conscripted army of World War II, Korea, and Vietnam, to a small body of high-quality, long-service professionals. Second, Army reform centered primarily on ideas and people rather than machines. To be sure, the Army went to war with first-class weaponry. But it was the quality of the young soldier and his leaders and the excellence of their operational method that proved so overwhelmingly decisive in the Gulf.

A visionary cohort of soldiers who stayed with the institution during the difficult years following the war in Vietnam was responsible for launching the Army on its path to reform. They saw in the volunteer Army concept the opportunity to create a newstyle Army capable, for the first time in its history, of winning the first battle at the lowest possible cost in human life. The small professional Army they created would be able to maneuver with unprecedented agility and speed. Its leaders would possess the independent spirit to make decisions on their own initiative. This new Army would seek to outthink rather than outslug its opponents. It would be peopled by a new style of soldier whose intelligence, skill, and esprit would allow him to take on and defeat a more numerous foe. Thanks to these soldiers and their successors, the Army that met Saddam Hussein was fundamentally different from the Army that emerged from the jungles of Vietnam 20 years before.

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Reading 15

THE BATTLE FOR COCO SOLO

Major Evan A. Huelfer

In the early morning hours of 20 December 1989, elite American forces invaded the Republic of Panama in a lightning raid. Independent units simultaneously attacked a multitude of isolated objectives in a brilliantly executed contingency plan. During *Operation Just Cause,* I was the platoon leader of 3rd Platoon, Charlie Company, 4th Battalion, 17th Infantry Regiment, 7th Infantry Division (Light).

For several years preceding the invasion, Panamanian strongman General Manuel Noriega had subjected American citizens living in Panama to constant harassment. From early 1988 until May 1989, the U.S. Southern Command (SOUTHCOM) had attributed over one thousand occurrences of harassment to the Panamanian Defense Forces (PDF). After a string of serious incidents in May 1989, including the abduction and beating of an American sailor and Noriega's interference with Panama's presidential election, President George Bush took action. On May 11, he recalled Ambassador Arthur Davis and dispatched nearly 2000 soldiers to Panama. Bush warned that he "would not rule out further steps in the future."[1]

The United States exercised its rapid deployment capabilities by rushing to Panama two light infantry battalions from Fort Ord, California, a mechanized

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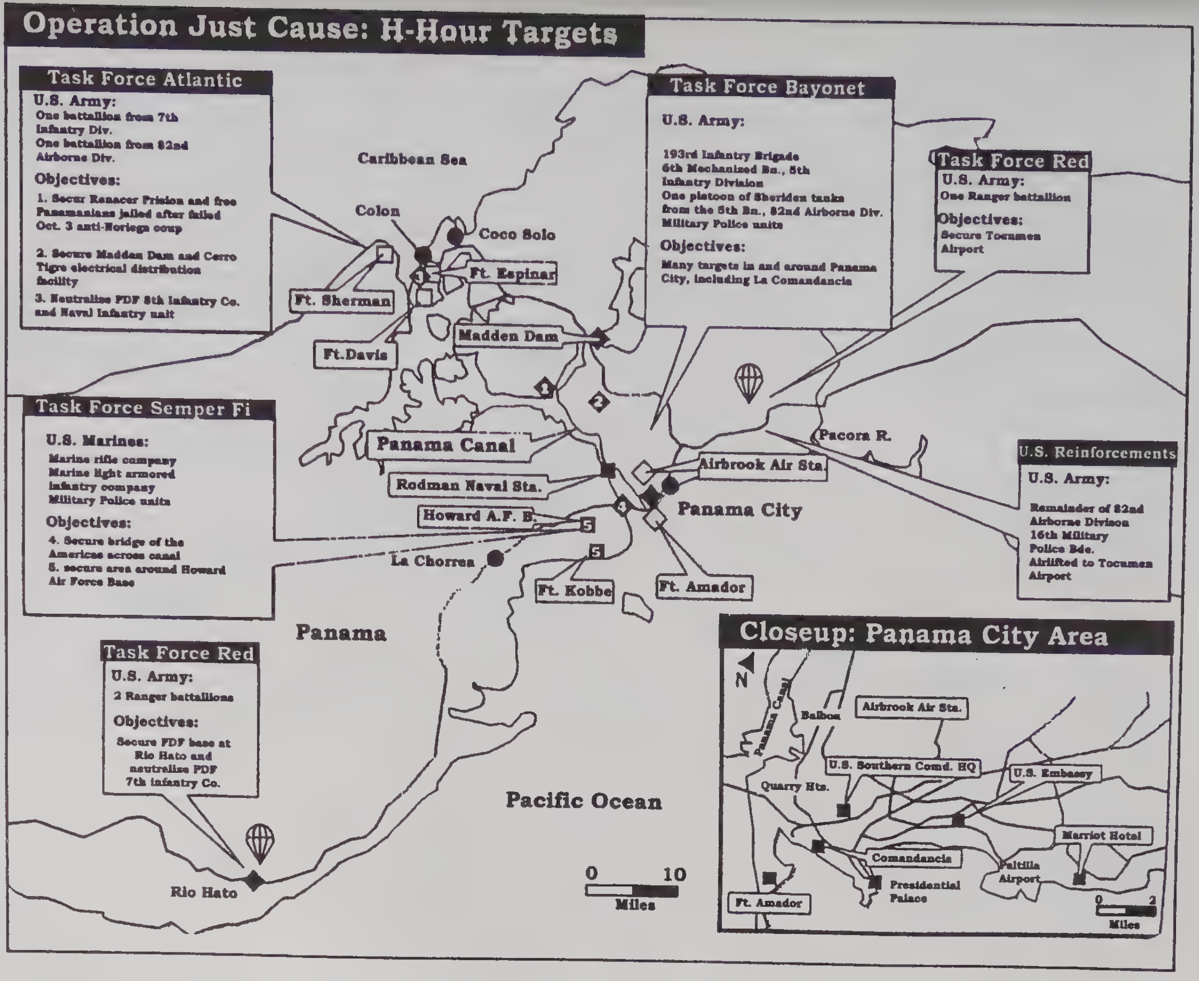
Major Evan Huelfer is a 1987 graduate of the United States Military Academy. He is completing his doctoral degree from the University of North Carolina and is an assistant professor of military history at West Point infantry battalion from Fort Polk, Louisiana, and a Marine company from Camp Lejeune, North Carolina. As the situation stabilized, battalions from Fort Ord's 7th Infantry Division began to rotate on three month tours. Their mission was to protect American lives and property and to exercise freedom of movement rights under the Panama Canal treaties. My battalion, 4-17 Infantry, began its rotation to Panama on October 29 after an intensive train-up period. This pre-deployment training focused on civil-military operations, rules of engagement, military operations in urban terrain, and included numerous live fire exercises. The high training tempo throughout 1989 would later yield huge dividends in combat.

Soon after arrival in Panama, the four companies dispersed to various points around the northern mouth of the Panama Canal. Charlie Company settled in at Coco Solo, a small community to the east of Colon, Panama's second largest city. The company established operations in an abandoned wing of Cristobal High School, a satellite school for American students residing in the area. From this base, the unit conducted security patrols in the surrounding areas to assure American residents of their safety, show American presence to the nearby PDF, and gather intelligence on their routines. The greatest potential threat in this area stemmed from the 8th PDF Naval Infantry Company located only about 200 meters away. Their boats sat moored in a dockyard behind their headquarters building about the same distance away. For five weeks prior to the commencement of *Operation Just Cause*, Charlie Company co-existed within a stone's throw of their future adversary.

Following a botched attempt to topple Noriega's regime in October 1989, new SOUTHCOM Commander General Maxwell Thurman developed OPLAN BLUE SPOON, a contingency plan to invade Panama and replace Noriega with democratically elected officials. Critical to BLUE SPOON's success was the neutralization of the PDF, Noriega's controlling arm and most effective tool for harassing Americans in Panama. Due to operational security precautions, the BLUE SPOON contingency plan was briefed to 4-17 Infantry only down to the platoon leader level. However, with innovative and imaginative training, the junior leaders found ways to rehearse the mission without compromising security. Through visual observation, mental wargaming, and inter-active discussions, all leaders became thoroughly imbued with the concept of the operation.

Charlie Company had a solid group of officers at its helm. The commander, Captain Christopher Rizzo, a 1984 West Point graduate, had just taken command in June. But in the six month interim before *Operation Just Cause,* the company had spent most of that period on deployments or out on training exercises, to include live fires. The Executive Officer, First Lieutenant Chris Mahana, had prior enlisted experience in the Marines and had already been in Charlie Company for two years, the majority as a platoon leader. His expertise kept the unit functioning smoothly. Charlie Company had the most



Operation Just Cause: H-Hour Targets

Task Force Atlantic

U.S. Army:
One battalion from 7th Infantry Div.
One battalion from 82nd Airborne Div.

Objectives:
1. Secur Renacer Prision and free Panamanians jailed after failed Oct. 3 anti-Noriega coup
2. Secure Madden Dam and Cerro Tigre electrical distribution facility
3. Neutralize PDF 8th Infantry Co. and Naval Infantry unit

Task Force Bayonet

U.S. Army:
193rd Infantry Brigade
6th Mechanized Bn., 5th Infantry Division
One platoon of Sheridan tanks from the 5th Bn., 82nd Airborne Div.
Military Police units

Objectives:
Many targets in and around Panama City, including La Comandancia

Task Force Red

U.S. Army:
One Ranger battalion

Objectives:
Secure Tocumen Airport

Task Force Semper Fi

U.S. Marines:
Marine rifle company
Marine light armored infantry company
Military Police units

Objectives:
4. Secure bridge of the Americas across canal
5. secure area around Howard Air Force Base

U.S. Reinforcements

U.S. Army:
Remainder of 82nd Airborne Divison
16th Military Police Bde.
Airlifted to Tocumen Airport

Task Force Red

U.S. Army:
2 Ranger battalions

Objectives:
Secure PDF base at Rio Hato and neutralize PDF 7th Infantry Co.

Closeup: Panama City Area

Caribbean Sea
Colon
Coco Solo
Ft. Espinar
Ft. Sherman
Ft.Davis
Madden Dam
1
2
3
4
5
5
Panama Canal
Rodman Naval Sta.
Howard A.F. B.
La Chorrea
Airbrook Air Sta.
Panama City
Pacora R.
Ft. Kobbe
Ft. Amador
Panama
Pacific Ocean
Rio Hato
0
10
Miles
N
Panama Canal
Balboa
Airbrook Air Sta.
U.S. Southern Comd. HQ
U.S. Embassy
Quarry Hts.
Marriot Hotel
Comandancia
Paitilla Airport
Presidential Palace
Ft. Amador
0
2
Miles

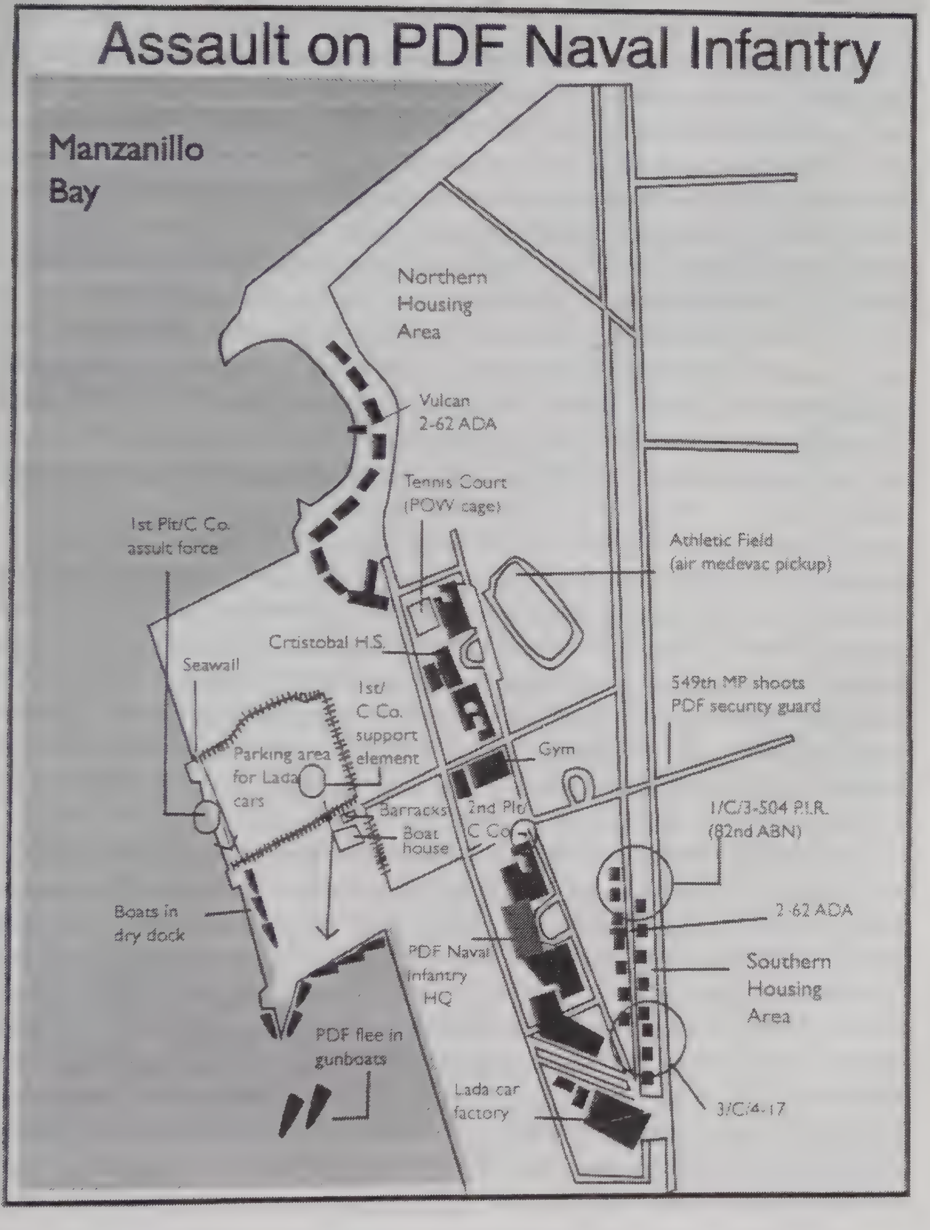
senior platoon leaders in the battalion. First Lieutenant Walter Burke, a 1986 Norwich graduate, had led First Platoon for 18 months already. Second Lieutenant Daniel Kirk, a newly minted West Point graduate, had just arrived in September. Despite his inexperience, he would lead his Second Platoon into dangerous combat merely three months after taking charge of it. I had led Third Platoon for fourteen months and counting. All five officers had successfully completed the challenging Ranger School, which enhanced their tactical competence as well as personal self-assurance. As a group, they possessed tremendous confidence in the ability of their men to accomplish the most difficult missions. The unit had succeeded time and again under strenuous training conditions; the company's leadership felt the results in combat would be no different.

In mid-December, Rizzo began to up the ante with the PDF. He directed more aggressive surveillance, to include platoon-sized patrolling provocatively close to the PDF headquarters. Platoons would establish a position in the Southern Housing Area directly across from the PDF building, then continue on with the patrol after a short period of time elapsed. On occasion, a 20 millimeter Vulcan anti-aircraft gun would be towed into position and pointed at the PDF building to augment the infantry platoon's intimidating posture. At first, these demonstrations unsettled the PDF soldiers, but after several occurrences, it served to lull them into a false sense of security.

Captain Amadis Jimenez, commanding officer of the 8th PDF Naval Infantry, Company, had only assumed command of his unit three days prior to *Just Cause*. When he took command, the menacing presence of the Vulcan in front of his headquarters alarmed him, but other PDF officers played down his fears. Not to worry—the Americans had been doing that every night for the past 15–20 days, they informed him. This deception proved to be vitally successful once *Just Cause* commenced.[2]

On December 15, Noriega installed himself as head of the Panamanian government and declared himself as "Maximum Leader." On that date, he announced that Panama was in a "state of war" with the United States. The very next night, PDF soldiers shot and killed an American Marine, Lieutenant Robert Paz, at a roadblock. A Navy SEAL captain, innocently sitting with his wife in the next car, witnessed the murder. PDF soldiers on the scene detained the couple and bustled them to a secure location where they beat the officer and harassed his wife. They repeatedly kicked the officer in the head and groin and threatened him with death if he did not reveal details on his unit and assignment. Within hours of these two incidents, SOUTHCOM placed all units on alert.[3]

Charlie Company deployed to its BLUE SPOON assault positions as specified, but after several hours of tense waiting, all units eventually stood down and returned to normal operating procedures. Back in the nation's capitol, top brass scrambled in preparation to brief the president. On December 17, General Colin Powell, the Chairman of the Joint Chiefs of Staff, had


Assault on PDF Naval Infantry
Manzanillo Bay
Northern Housing Area
Vulcan 2-62 ADA
Tennis Court (POW cage)
Athletic Field (air medevac pickup)
1st Plt/C Co. assult force
Crtistobal H.S.
Seawall
1st/C Co. support element
549th MP shoots PDF security guard
Parking area for Lada cars
Gym
Barracks
2nd Plt/C Co.
Boat house
1/C/3-504 P.I.R. (82nd ABN)
2-62 ADA
Boats in dry dock
PDF Naval infantry HQ
Southern Housing Area
PDF flee in gunboats
Lada car factory
3/C/4-17

recommended firm action in this case to the Secretary of Defense, Richard Cheney. After two hours of consultations with his top advisors, President Bush had been convinced that an invasion was the right thing to do. The formal order issued the next day established H-Hour for the invasion at 0100 hours on the morning of 20 December. Elements of the 82nd Airborne Division at Fort Bragg, North Carolina and Ranger units from two locations in Georgia would parachute in at that precisely synchronized jump-off time.[4]

After the killing of the Marine Corps officer, Charlie Company resumed its routine schedule of patrolling at Coco Solo. No one knew that other units in the United States had been alerted for an invasion of Panama. On 19 December, the Brigade Tactical Operations Center notified Rizzo to report for a briefing at 1830 hours. Then and there, he found out for the first time that his soldiers would be going into combat that night.

Rizzo returned to Coco Solo two hours later and gathered the key leaders. His face exhibited a unique expression none of us had ever seen before. He announced to the assembled leaders, "H-Hour is tonight at 0100 hours." The air felt heavy with tension; everyone in the room felt a bit nervous, unsure of his destiny at the night's end. Men displayed anxiety in a plethora of ways: some laughed a little to add levity to the stressful situation; some offered up motivational aphorisms; while others sat in silence and pondered their fate. My mind raced forward to all the things that had to be done in a few short hours. My stomach felt tight and my hands trembled as I took notes. Rizzo felt the same sick feeling upon notification. He recalled, "At first, an uncontrollable fear takes over your body until you can grip yourself and focus on the tasks at hand." Kirk inadvertently relieved some of the tension felt in the room. When he opened his soda can during the commander's briefing, it sprayed out from the pressure buildup. Everyone's laughter temporarily reduced some of the anxiety.

At 2100 hours, the company assembled in the hallway so Rizzo could brief all of the soldiers one last time. Everyone felt nervous but equally confident that we would succeed. Charlie Company retained the exact same mission as the BLUE SPOON contingency plan that we had rehearsed. After Rizzo finished his short talk, the soldiers returned to their platoon areas for final preparations. Earlier in the evening, before the commander had returned from Brigade headquarters, Mahana had taken the initiative to issue the company's combat load of ammunition. When 18th Airborne Corps combat Communications Electronics Operating Instructions (CEOIs) arrived for the company, he made an intuitive assumption that something was out of the ordinary for that night's operation.

Since platoons had less than two hours before departing, little time remained to issue detailed operations orders. The platoons spent most of that precious time conducting backbriefs and final inspections, because by then, every soldier in the company knew exactly what he had to do anyway. As I issued final instructions to my platoon, I tried to project the image of a calm and confident leader. But like everyone else, I too waged a battle with my own personal fears. Anyone that has ever confronted a potential life-ending situation naturally feels nervous about it. Each soldier experienced the physiological indicators of stress: sweaty palms, dry mouth, churning stomach, and tight sphincter. If left unchecked, this reaction could have paralyzing effects on the mind. I was ever cognizant that my men watched my actions and body language for signs; the last thing I wanted to show was fear or panic. I made a conscious effort to exude confidence as we all prepared for our first taste of combat.

The PDF at Coco Solo had been successful at concealing their strength and intentions. First Lieutenant Robert Murphy, 4-17's Intelligence Officer, had estimated 100–115 soldiers in the 8th Naval Infantry Company, who were armed with a mixture of American and Soviet made weapons. The heavy machine guns on the boats accounted for their most potent threat. Docked at the naval yard were two Vosper patrol craft with 20 millimeter chain guns, two Swift ships with .50 caliber machine guns, two PT boats with one .50 caliber machine gun, and several other boats hoisted in dry dock. These heavy weapons were potentially the greatest threat, and therefore, earned the most attention in planning considerations.[5]

Lieutenant Colonel Johnny Brooks, 4-17's battalion commander, stipulated five major concerns regarding operations at Coco Solo. First, he could not allow the boats to escape with their firepower intact. Second, he had to protect U.S. citizens in the area. Third, he had to minimize collateral damage to private property. Fourth, he had to prevent small groups of armed PDF soldiers from escaping the initial battle. Finally, he had to prevent the PDF from using their heavy machine guns from influencing the battle.[6]

Charlie Company had the mission to neutralize the 8th PDF Naval Infantry Company at Coco Solo. To accomplish the mission, Rizzo had a variety of units at his disposal. Besides his organic assets of three rifle platoons, a 60mm mortar section and an anti-tank section, he also had control over an attached platoon from the 82nd Airborne Division[7], a platoon from the 549th Military Police Company, and two 20 millimeter Vulcan anti-aircraft guns from the 2-62 Air Defense Artillery Battalion.

With these resources, Rizzo formulated a plan to defeat the enemy forces at Coco Solo. The Military Police platoon had the task to seal off access to Coco Solo via the main road to the east. Their vehicle-mounted M-60 machine guns would be ample firepower for the task. The Third Platoon would block the PDF's possible escape to the south. First Platoon would secure the PDF boats at the dock to prevent their escape to the west via water. The attached platoon from the 82nd Airborne would provide suppressive fires from the Southern Housing Area directly across from the PDF building One of the Vulcans would also be placed at this location to augment the fires. The Second Platoon, the main effort, would enter the PDF building from the third floor of an adjacent building and clear it top to bottom. The other Vulcan would be positioned along the water's edge in the Northern Housing Area to destroy any boats that tried to escape to the north out of the Manzanillo Bay. The Mortar Section would move to a position where it could place indirect fire on the boats, if needed, and the Anti-Tank section personnel divided up amongst the rifle platoons.

If Charlie Company needed additional fire support, an Air Force AC-130 Specter gunship was scheduled to be on station circling overhead and would be controlled by the company's Fire Support Officer, Second Lieutenant David Kim. Unfortunately, the AC-130 did not arrive on station when the company needed it, and when it did arrive, it came too late to be used. The company 60mm Mortar Section was also a key fire support asset, however, the rules of engagement stipulated that indirect fires had to be approved by the Brigade Commander. Planners implemented this control measure to limit collateral damage to the surrounding area.[8]

As H-Hour approached, soldiers went about their last minute preparations. Each soldier carried a basic load of 210 rounds in seven magazines for his individual weapon, plus two or more hand grenades. Some carried additional rounds for the machine guns, demolition material, or anti-tank rockets. Nobody seemed to mind toting extra firepower. Every soldier wore a protective vest, kevlar helmet, and carried at least four quarts of water. Leaders also had night vision devices, binoculars, radios, and flashlights. All added together, the typical combat load exceeded fifty pounds without even counting the rucksack. Besides the physical preparation for combat, some had to ready themselves emotionally. A few soldiers taped messages with a camcorder for family and friends—just in case. Kirk felt so sure that he would be killed that night, he wrote a farewell letter home to his mother and tucked it away under his pillow.[9]

To ensure that the attack would not be compromised, elements tried to deploy to their assault positions as routinely as they had done on prior nights. Only three nights had passed since the last full scale alert in the wake of the Marine officer's killing. At 2300 hours, Third Platoon began its infiltration to the Southern Housing Area by squads. As I departed with one of the squads into the tranquil darkness, I passed a man casually walking his dog. It struck me how peaceful it must have been to be ignorant of the impending action; he probably did not know that his community would be torn asunder in a few short hours. During the brief stroll, my thoughts drifted momentarily to sorrow profound sympathy for all the innocent people that would be killed or maimed that night in Panama. This horrible thought came to fruition for hundreds over the course of that night including three teachers at the school where we lived who were tragically killed at one of our battalion's roadblocks.[10]

Once the entire platoon had assembled, it began to evacuate all occupants from their homes and consolidated the residents in a secure place at the house farthest from where the major action would be. Many of the evacuees were dependents whose spouse had already been alerted earlier to deploy somewhere else as part of the BLUE SPOON contingency. First Platoon began its movement to its assault position at 2330 hours. Second Platoon assembled in the school's gymnasium at midnight.

Sometime around midnight, a U.S. counter-intelligence unit intercepted a call to the PDF's Military Zone II Headquarters in nearby Colon. The caller said, "The party's on for one o'clock. Get out of the area." Shortly before the shooting began at Coco Solo, Captain Jiminez received a call from his immediate supervisor, a PDF lieutenant colonel. Jimenez's superior instructed him to reinforce security around the complex because a U.S. operation "was about to go down." He recalled later that was all he had been told. Nobody explained what was going to happen. He expected repercussions for the killing of the American officer, but not a full scale invasion of the entire country. Lacking further guidance, Jimenez ordered one platoon to defend against U. S. forces from their sand-bagged windows at the front of the building and another platoon to man the boats out at the dock. He ultimately envisioned escape to Colon, two nautical miles away.[11]

The following incident is one of the most controversial and significant events at Coco Solo. At H-minus-26, as platoons waited in their assault positions, Sergeant First Class Charlie Gray, the platoon sergeant for the Military Police Platoon, spotted several men in the woodline near his blocking position. Gray claimed that the men were using a radio to report American positions. He relayed this information to his platoon leader and said he was ordered to "take that position and silence that radio at all costs." Major Tom Ryan, 4-17's Operations Officer, refutes Gray's story. "He didn't have an order. He didn't have a mission to take anything down, simply to block," clarified Ryan.

Gray approached the group of men and demanded their surrender; he could claim he took the first prisoners of war. Gray alleged that one of the men jumped him, and in the ensuing scuffle, he shot the assailant point blank in the chest, killing him instantly. The other men he had spotted quickly came out of the woods and surrendered. Because the rules of engagement in the operations order authorized deadly force against an armed enemy after 0030 hours, and the shooting occurred at 0034 hours, Gray's actions fell within legal parameters. Due to the unclear circumstances surrounding the incident, the case was later referred to the Army's Criminal Investigation Command, but dropped due to a lack of evidence.[12]

However justified Gray's actions might have been legally, he certainly jeopardized the entire operation tactically. His decision to fire a weapon before clearing it with the commander had monumental ramifications. Next to the recently slain victim, surprise became the second casualty of the night. At 0034 hours, that solitary blast reverberated crystal clear in a location where no shooting was expected to occur. At H-minus-26, synchronized or not, *Operation Just Cause* had begun for Charlie Company. And for the most part, no one, except for Sergeant First Class Gray, knew what had happened. The sound of that single gunshot, intertwined with the rising tension, triggered an irreversible sequence of events.

Within minutes, PDF soldiers began scrambling out of the back of their building toward the boats. Possibly this could have coincided with the warning call to Jimenez to prepare defensively, but more than likely was linked to the mysterious gunshot. Lieutenant Mahana sat in a sand-bagged bunker over-watching the street behind the PDF building. The bunker position protected two M-60 machine guns and an M-203 grenade launcher to seal off the escape route to the dock. But to Mahana's dismay, as the enemy fled in strength, it was still long before H-Hour. He immediately radioed Rizzo and requested to open fire. Some of the boats started their engines at this time, so it seemed apparent that they were going to try to escape before the trap could be closed.[13]

Rizzo notified battalion of the situation and requested to initiate early. Because of the relative proximity of the battalion's objectives, the gunfire would be heard at other locations. Brooks was concerned that his other companies might not yet be in place. During the planning process, this contingency had been addressed. The brigade commander had stated that early activity would not initiate H-Hour prematurely, especially since the operation depended upon the synchronized arrival of other units flying in from the United States. Brooks believed if the PDF escaped into the water with their firepower intact, it could spell disaster for other U.S. units in the vicinity. Although this contingency had been previously discussed, the brigade commander did not hesitate to grant approval to Brooks' spontaneous request for early initiation. Brooks immediately relayed the message to Charlie Company. [14]

After a surrender request delivered by bullhorn to the PDF drew no response, Rizzo ordered the Vulcan to commence firing on the building. The building shuddered as the initial barrage blasted the upper two floors and then worked its way down. The Vulcan spewed out approximately 1100 rounds before jamming.[15] Simultaneously, the attached platoon launched some sixty anti-tank rockets (a mixture of both AT-4s and LAWs) at designated places on the building. Third Platoon opened fire at designated targets within its sector. With all weapons at Coco Solo erupting at once, the cacophony of automatic weapons and rocket fire rose to a deafening crescendo. Mahana unleashed his two M-60 machine guns on the PDF guard shack protecting the dock's entrance and sprayed any PDF soldiers still making their way to the boats. If he had been able to fire earlier, he could have caused significantly more casualties. Due to the unexpected initiation time and the pause to get permission to engage, many PDF soldiers had already made it safely to the boats across the 200 meters of open area on the docks. From there, they would be in an excellent position to spoil First Platoon's mission of securing the boats, which should have been lightly defended.[16]

First Platoon infiltrated toward their objective from the north along a seawall and then divided into two elements as it approached the dock. The smaller support element, led by the platoon sergeant, Staff Sergeant Arbues, had the assignment to penetrate and destroy a small barracks and boathouse on the dockyard, and from that location, support the assault element with suppressive fires.

The larger assault element had almost moved into position when some of the running PDF soldiers spotted it. The assault element immediately came under fire by PDF soldiers firing from the hip enroute to their boats. An intense exchange of gunfire opened up on the dockyard, probably even before the Vulcan had initiated its barrage in front of the PDF headquarters. A first Platoon gunner pegged one PDF soldier in the head. Only his glasses and a large pool of blood remained after his comrades dragged him along onto a boat. As one of the boats made its way out into the water, Specialist Richards fired upon it with his Squad Automatic Weapon (SAW). But enemy fire converged on First Platoon's intrepid men from almost every boat moored at the dock, effectively pinning down those at the front of the assault element.[17] The situation rapidly degenerated into confusion well before H-Hour.

Second Platoon had been staging in the gymnasium in preparation to assault the PDF Headquarters building. The plan called for a two quick firepower demonstrations by the Vulcan and a platoon firing anti-tank rockets to convince the PDF of the futility of resisting. If the PDF did not surrender, Second Platoon would enter the building on the third floor and clear it from top to bottom. The Vulcan's initiation at 0043 was 17 minutes before Second Platoon had expected.

As anti-aircraft, rocket, and small arms fire pummeled the PDF building, Second Platoon readied to go into action. It first had to traverse an open area 75 meters wide between buildings. Sergeant David Rainer, leading 1st Squad, tossed a smoke grenade into the clearing to conceal his squad's movement. Before the smoke had thickened, 1st Squad dashed across the gap to the front side of a Chinese restaurant, an attached extension to the PDF building. The smoke grenade's initial flame silhouetted the moving soldiers against the night sky, which immediately drew PDF fire upon them. Although miraculously no one was hit, Rainer recalled tracers whistling by overhead and churning up the grass between his legs as he ran.[18] Once 1st Squad safely made the dash, the rest of Second Platoon crossed the gap under the concealment of the billowed up smoke.

Private First Class Jeffrey Secor, the platoon's point man and street-wise soldier, had been up and down in rank due to disciplinary problems. But none showed more fire discipline that night than he did. With a finger nervously gripping the trigger of his M-16, Secor burst through the door of the Chinese restaurant into the darkness beyond. The electricity in the entire structure had gone out with the initial barrage. Three to four individuals passed by to his immediate front, but he did not fire—they were civilians. While he fired his weapon many times in the subsequent two hours, he showed excellent judgment in not shooting his weapon in that split- second decision. An error, even under tremendous duress, would have easily produced several casualties.

Second Platoon continued to grope its way through the building to the top floor. Without a diagram of the interior layout, they cautiously probed though the darkness not knowing what to expect and not precisely sure which way to go. Several wrong turns exacerbated their frustration as well as anxiety, especially since the Vulcan still hammered away at the adjacent building and its tracer rounds streamed visibly past the windows. Second Platoon gathered seventeen civilians inside the building, including an old woman that had fainted when two camouflaged soldiers unexpectantly surprised her. Several males, fearing that they would be shot, had to be coaxed out of hiding places. Second Platoon soldiers safely escorted all of these civilians out of harm's way.

With that time-consuming task completed, the platoon finally found the third floor door connecting to the PDF Headquarters. Kirk paused to glance out the window. To the front, the Vulcan's red tracers pummeled the building with a thundering roar. To the rear, he could see First Platoon exchanging its red tracers with the PDF's green tracers in a vicious firefight. He almost became mesmerized watching when his Radio Telephone Operator (RTO) pulled him back down and admonished him to be more careful.[19]

Once the preparatory fires had ceased, Second Platoon received clearance to begin the assault. Only a locked door separated them from the PDF on the other side. Corporal Joseph Legaspi placed a three pound charge of C-4 explosives on the door with a time fuse. The blast jolted the door open, but also sparked a huge fire. The room they occupied happened to be a garment shop—with loose cloth spread everywhere. Once the cloth ignited, the fire immediately expanded. Soldiers hurriedly tried to put it out so they could continue on with their mission, expending 18 fire extinguishers in the process, but the fire soon raged out of control. The smoke from both the fire and the explosion combined to produce noxious fumes, which made some of the soldiers, including the platoon leader, vomit. The stench from the burnt cordite in the enclosed confines proved too strong for their knotted stomachs. Once inside the PDF side of the door, Kirk detached his 3rd Squad to fight the fire. Those soldiers never did rejoin the rest of the platoon in clearing the building. After the fire had consumed the room in which it began, they had to exit the building the same way they entered. By a freak accident, Second Platoon had lost a third of its firepower even before it began to confront the enemy at hand.

When the lead two squads entered the PDF side of the doorway, they did not know what to expect. To their amazement, the entire top floor housed an open basketball court, which meant the building probably measured about 100 by 60 feet. Second Platoon's remaining two squads moved directly to the stairwell at the front of the building. It went down to the left and right and met again at a foyer on the second floor and was similar from the second floor to the first. Composed mainly of concrete interior walls and cinder block exterior walls, the building also had an open elevator shaft along its back wall. The bottom two floors contained a maze of rooms, offices, and partitioned off sections.

As Second Platoon began clearing the second floor, it became apparent that the PDF had gathered on the first floor. The two squads methodically proceeded room-to-room using two-man buddy teams: one tossed in a grenade and the other followed the blast with a burst of rifle fire. A later inspection revealed the tremendous damage a fragmentation grenade can cause within an enclosed room. The metallic casing explodes into thousands of tiny fragments which splinter virtually every inch of wall, ceiling, and floor. A single fragmentation grenade causes horrific bodily damage to humans caught unprotected within its blast radius.

The impenetrable darkness and incredible noise level created pandemonium inside the PDF Headquarters as two platoon-sized elements battled for survival. The pitch black conditions rendered Night Vision Devices inoperable and the building's cement-like composition made the explosions echo even louder. To add to the chaos, American and Panamanian soldiers screamed in both English and Spanish. No matter where they were that night at Coco Solo, most soldiers in Charlie Company would attest that that was the loudest night they had ever experienced in their lifetime.

When a group of Second Platoon soldiers approached the elevator shaft on the second floor, a PDF soldier below bellowed up for the Americans to surrender because he had a weapon. Private First Class Michael Hardy ran toward the voice and began yelling obscenities. His partner, Private First Class Sidney Goffney, bowled a grenade by Hardy's feet and down the shaft and pulled Hardy out of the way. Only groans returned up the shaft after the explosion.[20]

The platoon prepared to move down to the first floor. After *Operation Just Cause* had ended, Captain Jimenez asserted that he had desired to surrender all along. In the heat of combat, with the confusion and language barrier, compounded by the engulfing darkness and thick smoke, it was impossible for members of Second Platoon to ascertain the intentions of the PDF on the floor below them. At that decisive moment, Second Platoon stood poised to descend the stairwell to meet the enemy—a potentially fatal encounter for one of the parties. Jimenez felt he had better surrender his men now or face certain death. He inched his way toward the stairwell and called up his desires to surrender.

Kirk vividly recalled the overwhelming confusion at that juncture. He had finally found the enemy, but could only get to them by going down the stairs and meeting them face-to-face. This realization heightened the platoon's sense of trepidation and anxiety. Kirk's element had not taken any casualties yet and the attack had gained momentum after its auspicious beginning with the fire on the third floor. Now that they were this close to the enemy, Kirk could not afford to make any mistakes, especially since he had already lost a squad to fire-fighting duties. His mind reduced the options to a simple calculation: either kill or be killed.

The bantering back and forth between his soldiers and the PDF below was clearly audible, but neither he nor his lead squad leader, Sergeant Rainer, spoke Spanish. Kirk asked Specialist James Davis, a Spanish-speaking soldier, if he could understand what the PDF were saying. Davis replied that all he could make out was "something about weapons and surrender," but was unsure if the PDF were saying that they had weapons and wanted Second Platoon to surrender, or were willing to surrender themselves.

In the enclosed environs of urban combat, it can be deadly for a force to bunch up inside of a building. A single grenade could wreak devastating effects upon soldiers clustered in a room. Fearing that potential catastrophe, Kirk loathed to lose the momentum of his assault. He ordered Rainer to continue down the stairwell. Rainer paused and stated his uncertainties about the enemy's intentions. In a subtle over-reaction to an earlier hesitation in action by Rainer, Kirk persisted and screamed at Rainer, "Kill him!," in reference to the anonymous voice downstairs. Rainer complied with the order by tossing a grenade down the stairwell. Kirk later remembered that the use of that barbarous phrase truly shocked him and brought home the stark reality of combat.[21]

Jimenez later reported that the grenade injured three of his soldiers. He felt the grenade had been thrown intentionally despite his efforts to surrender. As Second Platoon narrowed the gap between forces, Davis finally maneuvered close enough to where he could comprehend the PDF soldiers. Jimenez had continued his attempts to surrender, adding that he never heard the initial surrender requests made over the loudspeaker in front of his headquarters.[22] Although the grenade caused unfortunate injuries, it did serve to expedite the surrender process. More importantly, in accomplishing the company's most difficult mission, Second Platoon did not suffer a single casualty.[23]

Kirk and his soldiers proceeded cautiously down to the first floor. With his translator, Davis, at his side assisting him, Kirk ordered the PDF soldiers to crawl past him on all fours. Second Platoon soldiers bound the prisoners in temporary flex-cuffs and escorted them to a holding area on the school's tennis courts. Second Platoon had taken 15 prisoners out of the building by 0209 hours and completely cleared the entire structure by 0241 hours.[24] The platoon found a fully locked and loaded .50 caliber machine gun on the bottom floor pointing out the window at the support by fire position, but fortunately this weapon remained unmanned during the attack.[25]

From its blocking position in the Southern Housing Area, soldiers from the Third Platoon fired at targets in their sector during the opening moments of the attack. One of my M-60 machine guns noisily belched away from the windowsill on the floor above my doorway position. His expended links clanked to the floor as his weapon unleashed its deadly fury. As two entire platoons joined fires with the Vulcan, all firing from the Southern Housing Area, the noise-level climaxed to a deafening roar. The buildings we fired from shuddered from the violent vibration. Within sixty seconds, I ordered my platoon to "cease fire." I was sure that there were no more targets in our sector by that time and I was concerned about the many civilians in our area. It was very tempting for the individual soldier to continue firing because so much firing was still going on all around us, especially the Vulcan barely 100 meters to our right. It seemed like a live fire exercise in some respects—it felt awkward not to be firing when everyone else still was. But with many civilians still working in factories to our front, I had to ensure that my soldiers only fired at legitimate targets. Confident that no more valid targets existed within our sector, it became a matter of waiting for the other two platoons to accomplish their missions and stand by for further instructions from the commander.

Sometime around 0200 hours, my 2nd Squad reported seeing sporadic sniper fire coming from the Lada car factory on our left flank. Merely minutes prior to the opening shots, the security guard in front of that building, luckily for his sake, left his post to go inside. Corporal Robert Coulter, a 2nd Squad team leader, asked for permission to engage. Coulter fired an AT-4 rocket at the suspected sniper position, but because of the oblique angle from which it was fired, the rocket glanced off the concrete building and exploded across the street. The sniper fire did, however, stop after that.

At this particular point in the battle, I intently listened to the command net on the radio to ascertain the situation within the other platoon's sectors. The Chinese restaurant burned in brilliant flames and soon spread over to the PDF side of the building. By morning, the fire had completely consumed the entire right side of the structure and collapsed the roof above the PDF Headquarters portion down into the third floor. As we watched the fire blaze on, we hoped for the safety of Second Platoon inside the building and First Platoon on the other side of it. The methodical clearing process by Second Platoon ensured grenade explosions and bursts of rifle fire every few minutes for over an hour, and of course at the time, we did not know which side had been initiating all of those sounds. As 0200 approached, we were quite surprised to still hear persistent gunfire so long after H-Hour. Resistance had been much stiffer than expected.

About 0330 hours, Third Platoon soldiers heard voice coming from the V-shaped factory building across the street to our front. Private First Class Francisco Lopez maneuvered his way across the open area by dashing from tree to tree to get close enough to speak to those in the factory. He traversed directly in front of the location where the sniper fire was spotted earlier. After several minutes, Lopez coaxed eleven frightened men out of the factory. They had been on the night shift when the H-Hour attack surprised them. After the power went out, several bullets had hit their building, including the AT-4 that had caromed from across the street. They had immediately gotten down on the floor and had laid there in silence for several hours in the darkness. Third Platoon soldiers searched, questioned, and evacuated the men to the company holding area.

Rizzo denied Third Platoon's request to clear the rest of that building and the Lada car factory until daylight. About 0800 hours, 2nd Squad assumed the mission to clear those two buildings. Inside the Lada compound, enclosed by a cyclone fence, 2nd Squad captured three PDF soldiers attempting to hide. They had donned civilian shirts over their uniforms. Although one possessed a pistol, they quickly surrendered and were taken to the holding facility for further questioning. One of the captives, aged and portly-looking in the daylight, appeared harmless, if not pathetic, for a soldier. But before I could generate any sympathy for his predicament, I reminded myself that despite his humble physical appearance, he could have easily ended the life of one of my soldiers.

Meanwhile on the dock, First Platoon's support element had cleared its objectives after a brief firefight. They first had to penetrate a cyclone fence around a small barracks. Once in, they tossed hand grenades into the barracks, but found it empty. Specialist Verlon Stokes rolled a grenade under a truck, killing the two PDF soldiers hiding beneath it. Two more PDF soldiers burned to death when grenades thrown into the boathouse ignited a butane gas explosion.[26]

The major firefight at Coco Solo evolved closer to the boats with the assault element. This development somewhat surprised Rizzo because he had not foreseen that many PDF soldiers safely reaching the boats. Prior reconnaissance indicated that there would only be about six enemy personnel at the boats. The warning at H-minus-26 and the telephonic warning to Jimenez drastically altered the force ratio. Doctrine suggests that a successful attack should have at least a three-to-one advantage for the attacking force. At this point, First Platoon attacked at almost even numbers.

Sergeant Richard Mowatt, another former Marine, led the 21-man assault element forward. The element came under fire almost as soon as it made the corner around the seawall. At first, the volume of fire sputtered, but gradually increased as the element moved closer to the boats. Initially, Mowatt could only make out enemy muzzle flashes from his vantage point at the front of the assault element. As he crept closer to the objective, he could distinguish actual enemy personnel. Although the attack occurred in the dead of night and in the open expanse of a boatyard, no one in First Platoon used their PVS-7s to enhance their night vision capability.[27]

The assault element soon found itself pinned down as the PDF soldiers on the boats gained fire superiority. Lieutenant Burke ordered the lead group to fire anti-tank rockets to reduce the incoming fires. Mowatt moved forward with one of his team leaders, Sergeant Joseph Hein. Sergeant James Daniel, the company's Anti-Tank Section Leader, also moved up with Private First Class Rudolf Ubersezig, to form two two-man firing teams. One team would fire LAW rockets while the other would cover them with machine gun fire. After firing the rockets, they would switch roles. Mowatt and Hein would fire after Daniel and Ubersezig. Daniel took a knee to aim, then fired. His rocket knocked over a mast on one of the boats, but the glare from the blast illuminated his exposed position.[28] PDF fire rained in on him from two different directions. At the height of the barrage, some twenty enemy soldiers fired on First Platoon.[29]

The hail of gunfire hit both Daniel and Ubersezig. Bullets ripped through the wrist and ankle of Ubersezig, a young soldier merely 18 years of age. The AK-47 round that struck Daniel penetrated above his knee, traveled along his femur through his upper leg, skipped off his hip bone, then exited out his buttocks. Burke watched as the bullet sent Daniel spinning around and crashing to the pavement. Instantly, Daniel screamed in pain, but Mowatt exhorted him to keep quiet so as not to draw additional fire to their position. Hein and Private First Class Hager administered aid to stop the bleeding and prevent the onset of shock. When they applied pressure to the buttocks wound, an entire hand nearly disappeared in the hole. They did not even notice the entry wound in Daniel's leg. Private First Class Clifton, the platoon medic, arrived to the front of the column within minutes to continue treating Daniel. But Daniel and Ubersezig would have to remain in place until First Platoon could gain fire superiority to get them out.[30]

Most of the assault element remained behind the cover of one of the boats in dry dock. Only the platoon leader (Burke), Specialist Patrick DiBernardo (his RTO), the M60 machine gunner, and the four men with anti-tank rockets had ventured forward toward the boats. Now two in this small group had been hit—and worse, enemy fire had them pinned down. The seven ducked for cover behind a large pile of scrap metal heaped on the dockyard's pavement. They had only moved about ten yards beyond the safety of the boat in dry dock. Some 500 rounds blazed in above and around them. They could hear the rounds crack in the air as they passed overhead and see the enemy's green tracers as they passed by and between them. Even from my location on the other side of the PDF building some 500 meters away, it looked like a giant green and red popcorn-maker as tracers streaked back and forth across the night sky. The loud clatter of bullets pelting off the scrap metal pile must have been terrifying to the small group using it for cover. Burke vividly recalled the fire-blue color of bullets careening off the pavement near him.[31]

The PDF had well out-gunned the First Platoon assault element, which now had clustered in two covered Positions. Seven lay pinned behind the scrap pile and the other fourteen remained standing up behind the boat in dry dock. To exacerbate their difficulties, they had lost communications with the commander. When the RTO dove for cover, the antenna on his PRC-77 radio came loose. It took nearly fifteen minutes to reestablish communications with Rizzo, still at his original position on the other side of the Coco Solo complex in the Southern Housing Area.[32] In the meantime, Burke relayed his situation to Rizzo through Mahana, located between the two. When Burke reported that he had been pinned down and taken casualties, Rizzo decided to dispatch the Vulcan from the Northern Housing Area to a position that could support First Platoon's movement.

Burke realized that to gain fire superiority, he had to get his men out of the PDF's converging fires. They had to spread out, and to do so meant leaving the safety of a covered and concealed position. The young enlisted soldiers sought guidance, "We can't move. What do we do?" Several of the sergeants, demonstrating inspirational leadership, took the initiative and began to move forward. This provided the necessary spark to get the platoon moving again. After Daniel and Ubersezig went down, First Platoon's responsibilities increased. Not only did they have to secure their objective, they now also had to evacuate their wounded buddies. The stark reality of their situation had dawned on them: "They will kill us unless we kill them first."[33]

One cannot over-estimate the role of cohesion and loyalty in combat. All of the lower ranking enlisted men and many of the junior sergeants in Charlie Company had been part of a COHORT system. They had all gone to basic training together and then went to the same first unit as a cohesive package. They had been in the army together since day one, lived together, and trained together, some for as long as six years. Now tested in combat together, they relied upon their strong bonds to each other and a deep collective to survive. They would go above and beyond the call of duty to save one another.

Sometime during the engagement, which kept First Platoon pinned down until well after 0200 hours, the second Vulcan moved to a new support position behind the high school onto high ground that provided a commanding view of the dock area. This Vulcan began to shower rounds upon the PDF firing from the boats. Because of Burke's radio problems, Mowatt also had poor communications with his platoon leader when they were not right next to each other. As Mowatt pressed forward, he found it difficult to entice more soldiers to come with him into more exposed positions and into withering enemy fire. Nevertheless, Mowatt sustained the attack on his own initiative. He fired the four anti-tank rockets (AT-4s) that soldiers passed up to him to provide suppressive fires for the rest of the element to move. Mowatt's rockets connected with a couple of boats; he saw two soldiers fall.[34]

The Vulcan added several hundred more large caliber rounds to the melee, which definitely helped to tilt the fire superiority edge to the American forces. First Platoon could clearly observe the Vulcan's tracers streaking by them. With the advantage in firepower, the assault element began moving forward again in earnest. With the Vulcan's tracers nearly passing over the heads of First Platoon, definitely well within the bounds of danger close range, Mahana personally ran over to the Vulcan and ordered the crew to stop firing. The two M-60 machine guns at Mahana's position had also shifted their fires onto the boats. Both guns added about 300 rounds each in support of First

Platoon. The additional firepower had all but silenced resistance on the docks and allowed First Platoon to close onto their objective.[35]

Sergeant Mowatt's heroic display of bravery encouraged the rest of the men to fire and maneuver. He earned the Bronze Star for valor as a result of his actions that night on the dock. The injuries suffered by Daniel and Ubersezig caused them both to be medically discharged from the Army. Lieutenant Burke received a grazing wound in the leg by a bullet, but did not notice it that night.

In retrospect, it is possible that the company 60mm mortars could have been used to place suppressive fires on the boats. The Brigade Commander, Colonel Kellogg, retained the authority to allow indirect fires. However, Rizzo could have employed them if First Platoon had been in grave danger.[36] The Mortar Section Sergeant, Clarence Wolfe, expressed confidence that he could have safely hit the boats in the hand-held direct fire mode.[37] Mowatt also believed that 60mm mortar fire would have effectively suppressed the enemy fire coming from the boats.[38] But Rizzo and Burke both felt First Platoon had been too exposed in the open area to safely employ them. If absolutely necessary, Rizzo had planned for Burke to adjust in the rounds by first over-shooting into the bay, then gradually dropping the distance onto the targets.[39]

Nevertheless, the assault element worked its way out of the temporary crisis. The combined firepower of the Vulcan and the support element provided the necessary suppressive fire for First Platoon to gain the upper hand. Once the platoon seized the first couple of boats to gain a foothold on the dock, the action ended quickly thereafter. Mowatt told Specialist Ruben Rodriguez, a Spanish speaker, to inform the PDF they had thirty seconds to surrender. To the relief of First Platoon, twelve PDF soldiers came out and surrendered.[40] First Platoon took several hours to find and capture the remaining enemy soldiers who were attempting to hide in the water and in the vehicles of the nearby Lada car factory. It took the longest time to thoroughly clear each of the boats.[41] After the battle, First Platoon discovered that it had been opposed by about 25 enemy soldiers, about fourfold the number it had been told to expect.

While First Platoon was engaged on the dockyard, one of the Swift ships and Vosper patrol craft escaped out into the bay. In the darkness and confusion, it was difficult to determine which boats, if any, had managed to escape. The first report of boat movement came at 0139 hours. This initial report confirmed that one boat had definitely made it out into the water, and possibly two. At 0146 hours, observers spotted two boats 200 meters to the east of the Colon monument. At 0341 hours, an AC-130 gunship neutralized one of the boats. No boats escaped north out of the Manzanillo Bay.[42] Charlie Company had completely secured Coco Solo by 0415 hours.[43]

After the individual platoons secured their objectives, the company began to consolidate and reorganize. The trauma life support team attached to the company ensured the wounded received immediate quality medical treatment.[44] Daniel and Ubersezig could not be extracted from the docks via helicopter until enemy fire had been completely suppressed. An aerial medevac, requested at 0312 hours, arrived at Coco Solo at 0402 hours.[45] Daniel eventually made it to a military hospital in San Antonio, Texas, the evacuation site for most of the serious *Just Cause* casualties. In addition to the two soldiers in Charlie Company wounded by gunshots, two soldiers from the attached 82nd Airborne platoon suffered backblast burns while firing anti-tank rockets in the prone position.

Although no one took an official "body count" of enemy soldiers at Coco Solo, rough estimates would account for about fifteen total casualties: about ten killed and five wounded and perhaps a dozen or more killed on the two boats that made it out into the water.[46] Despite the proximity of civilians living and working in the area, none were injured. The entire chain of command up to the Commander-in-Chief had emphasized that if civilians became casualties, "we might win the battle, but we would lose the war." Charlie Company captured at least thirty enemy soldiers and detained 65 civilians that first night at Coco Solo. All civilians were released at noon the next day.[47]

Many factors contributed to Charlie Company's success at Coco Solo. Lieutenant Murphy, from the Intelligence perspective, emphasized the PDF's deficiencies. Captain Jimenez had only assumed command a few days prior to the battle and did not have a thorough understanding of the forces arrayed against him nor of U. S. firepower capabilities. This paucity in knowledge and his inability to have known previous U.S. troop movement schedules probably contributed to Charlie Company gaining surprise in the attack.[48] Although the first time in combat for every soldier in the unit, what they lacked in experience, they made up for in other areas. Lieutenant Colonel Brooks attributed the company's success to rehearsals, discipline, and good junior leadership.[49] Rizzo echoed these observations and pinpointed leadership, teamwork, and soldier restraint as the keys to success.[50]

Students of the military art can glean valuable insights from Charlie Company's experience at Coco Solo. Paramount is the close parallel between combat and realistic training, which must be reinforced by detailed rehearsals. In stark contrast, the quality of training received by our World War II predecessors pales in comparison to today's all voluntary force.[51] Burke noted afterward that "everything you do in combat is taught in the Officer's Basic Course."[52] With the numerous pre-deployment live fire exercises, the squads and platoons possessed confidence in their ability to fire and maneuver with live ammunition. Although the PDF possessed some very lethal weapons systems, they did not take advantage of their own firepower capabilities. In fact, during the battle, most of their heavy machine guns remained in storage and never were mounted. The PDF soldiers were poorly trained, poorly led, and poorly motivated—a recipe for disaster.

Self-discipline is imperative in combat operations. On the modern battlefield, soldiers can expect to fight in close proximity to civilians. The United

States will demand minimizing civilian casualties, fratricide among friendly forces, and collateral damage to personal property. To achieve these results, every soldier must understand and uphold the rules of engagement and the laws of warfare. Urban combat requires that soldiers exercise firepower restraint. Charlie Company's soldiers exhibited tremendous fire discipline during many delicate situations fraught with ambiguity, high risk, and uncertain outcomes.

Finally, a crucial factor in combat is leadership. Both inside the PDF Headquarters building and outside on the dock, two relatively equal-sized forces squared off. In both cases, the PDF wilted under mounting pressure. The two U. S. platoon leaders had to first overcome adversity in order to emerge victorious. Leadership at all levels, from team leader through company commander, enabled Charlie Company to successfully accomplish its mission. The company's experience at Coco Solo was merely a microcosm of *Just Cause's* overall complexity. The battle exemplified modern combat in the technologically advanced, dynamic environment of today's world.

Notes

1. Caleb Baker, Thomas Donnelly, and Margaret Roth, *Operation Just Cause: The Storming of Panama* (New York: Lexington Books, 1991), 43–47.
2. Ibid., 247.
3. Ibid., 93–96.
4. Ibid., 96–101.
5. Robert D. Murphy, Written Interview, April 1992.
6. Ibid.
7. The 3rd Battalion-504th Parachute Infantry Regiment from the 82nd Airborne Division at Fort Bragg, North Carolina, trained at the Jungle Operations Training Center at Fort Sherman, Panama at the time of *Operation Just Cause*. The battalion divided up to conduct various combat missions during *Just Cause*. One platoon from that battalion attached to our company for the mission at Coco Solo.
8. Christopher J. Rizzo, Written Interview, March 1992.
9. Daniel K. Kirk, Personal Interview, March 1992.
10. Although casualty statistics for *Just Cause* are much disputed, SOUTHCOM released a report in mid January 1990 that accounted for 314 PDF and 202 Panamanian civilian fatalities. CBS News show "60 Minutes" reported in one episode that as many as 4000 civilians died in the conflict. SOUTHCOM's figures are probably most accurate, but probably over-estimate military and under-estimate civilian deaths. Bob Woodward, *The Commanders* (New York: Simon and Schuster, 1991), 195.
11. Baker, Donnelley and Roth, 247–248.
12. Ibid., 240–242.
13. Jimmie C. Mahana, Personal Interview, March 1992.

14. Johnny W. Brooks, Written Interview, March 1992.
15. Rizzo Interview.
16. Mahana Interview.
17. Walter Burke, Personal Interview, January 1998, and Baker, 246.
18. David Rainer, Written Interview, April 1992.
19. Kirk Interview.
20. Ibid.
21. Ibid.
22. Baker, Donnelley and Roth, 251.
23. Kirk Interview.
24. United States Army, 4th Battalion, 17th Infantry, Operations Log, December 1989.
25. Kirk Interview.
26. Baker, Donnelley and Roth, 248.
27. Richard M. Mowatt, Written Interview, April 1992.
28. Baker, Donnelley and Roth, 249.
29. Mowatt Interview.
30. Mowatt and Burke Interviews.
31. Burke Interview.
32. Rizzo Interview.
33. Burke Interview.
34. Mowatt Interview.
35. Burke and Mahana Interviews.
36. Rizzo Interview.
37. Clarence L. Wolfe, Personal Interview, December 1991.
38. Mowatt Interview.
39. Rizzo Interview.
40. Baker, Donnelley and Roth, 253.
41. Mowatt Interview.
42. United States Army, 4th Battalion, 17th Infantry, Intelligence Log, December 1989.
43. United States Army, 4th Battalion, 17th Infantry, Operations Log, December 1989.
44. Brooks Interview.
45. United States Army, 4th Battalion, 17th Infantry, Operations Log, December 1989.
46. Burke and Mowatt Interviews.
47. United States Army, 4th Battalion, 17th Infantry, Operations Log, December 1989.
48. Murphy Interview.
49. Brooks Interview.
50. Rizzo Interview.
51. George Wilson, *If You Survive* (New York: Ivy Books, 1987), 41.
52. Burke Interview.

Reading 16

LEARNING THE LESSONS OF THE PAST: MILITARY HISTORY AND THE FUTURE

Lieutenant Colonel James J. Carafano

We stand moments away from the third millennium—poised on the beginning of a new century—ushered into an age of violent peace that finds more American soldiers deployed overseas today than at the height of the Cold War in the 1980s.

We have a new national strategy that demands that the U.S. Army be a decisive, strategic force that can deploy around the world and conduct sustained land operations.

One tool the Army lacks to tackle this brave new world is a coherent, disciplined approach for harnessing the past to prepare us for the future.

We need a new approach to military history—a certain vision for these uncertain times—a vision that is sharply focused to give us the capacity to see through the fog of the future and positions us for the unanticipated challenges of today's and tomorrow's world.

As the Army uses Battle Labs to think creatively about ways to employ soldiers and equipment on future battlefields, military history can be used to encourage leaders to think in new and innovative ways about how they will command in tomorrow's combat.

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A vision for a new military history must begin with a clear statement of the intent of history training. History serves one fundamental purpose for the military professional: to sharpen the critical thinking skills of combat leaders.

This vision of history is based on the premise that the fundamentals of combat described in the new *Field Manual (FM) 100-5, Operations,* are clear and straightforward.

Commanders fight battles and engagements for one purpose: to impose their will on the enemy. They accomplish this feat of arms by being stronger at the decisive point. The key to having maximum relative combat power at the decisive time and place is the synchronized application of combat power.

Synchronization begins in the mind of the commander. He must be able to see the battlefield—to visualize the factors and forces that affect the outcome of combat. From this visualization, the commander determines how to impose his will on the enemy.

The talent to see the battlefield derives from the ability to think critically about combat, to weigh quickly the influences that determine the outcome of battle. This is where military history can aid combat leaders. The systematic analysis of military history demands critical thinking. History offers an opportunity to reflect on the dynamic nature of warfare and illuminates the leader's ability to see and understand the battlefield.

A new military history requires more than a statement of vision. It also must describe how to translate ideas into action. The key to exploiting the past rests on applying the principles of battle-focused training outlined in *FM 25-101, Training the Force, Battle Focused Training.*

To be useful to today's combat leaders, military history must form a seamless web with the other parts of a unit training program. Like all other training, history analysis must be based on training objectives and organized using the after-action review format.

Selecting what military history to study is comparable to selecting tasks for training. Leaders begin by analyzing the mission essential task list, supporting battle tasks and critical leader tasks. They identify strengths and weaknesses to determine training requirements and training objectives. As with any training event, battles and engagements selected for study should be relevant to the training objectives.

Studying battle requires a systematic and disciplined approach to the material. The after-action review process (Appendix G, *FM 25-101*) offers a methodical framework for organizing analysis and presenting findings. Like all after-action reviews, historical analysis should focus on three points:

- *Determine what was supposed to happen.* Understand the context in which the battle was fought, the operational and strategic overview. Analyze the higher commander's intent. Understand what leaders wanted to do and how they planned to employ the soldiers under their command. This portion of the analysis equates to a staff preparing an estimate and operations order for a commander.

- *Determine what happened.* Understand how execution differed from planning and preparation. How well did leaders see the battlefield? How well did they account for all the forces and factors that influence the outcome of the battle?
- *Determine lessons learned.* Analyze the outcome of the operation and determine insights for enhancing the understanding of present-day challenges. The training objectives should be used to focus discussion and analysis.

An important element of this process is to use Army operations doctrine to guide historical analysis. Terms such as mission, enemy, terrain, troops, and time available; battlefield operating systems; troop leading procedures; battlefield organization and commander's intent are historically valid concepts. They can be as useful in analyzing past combat as they are in preparing for the next battle.

Two training exercises offer excellent opportunities for learning from military history. The first is battle analysis, a systematic study of a battle or engagement to derive insights on contemporary military issues. The second is the staff ride, which combines a preliminary analysis of a battle or engagement with a detailed visit to the actual battlefield. Both of these exercises can be conducted using the after-action review process and can be readily incorporated into unit training and professional development programs.

Recently, a number of new books have appeared that purport to depict the face of future war. They describe new waves, new dimensions, shifting technologies and exotic robotics. In the past, few visionary writers have predicted with precision the nature of the next combat. Our efforts must focus on developing leaders who can fight in this uncharted territory. The best weapon we can give them is the ability to think with a critical mind.

History can be the battle lab of the mind and the past an experiment for the understanding how dynamic forces may interact in the future. Military history offers leaders a powerful tool for seeing the battlefield—but only if commanders have the energy and imagination to harness this potential to learn from the past. Those who do will find that training with military history develops and enriches the critical thinking skills essential to winning battles and saving lives.

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